Chapter 5: THE REGIONAL PERSPECTIVE

The SCORP Planning Regions

The SCORP planning regions identified in Chapter 1: Introduction, have changed with each new plan produced. These planning regions generally corresponded to regions in use at the time for some other purpose, such as agency planning regions. In the past three SCORPs, three different regions have been used. In 1978 there were thirteen regions, in 1983 there were five, and in 1988 there were seven. The 2000-2005 SCORP has maintained the seven regions used in 1988, to facilitate comparisons between plans and to provide consistency for future planning efforts.

SCORP planning regions are used in the presentation of supply and demand data and needs. The seven planning regions divide the state into broad areas with generally similar resource and population characteristics. These regions generally follow county boundaries as shown in the next figure, and therefore are meaningful to the vast majority of Massachusetts' residents who know in which county they reside. The following descriptions are provided to familiarize readers with the seven regions.

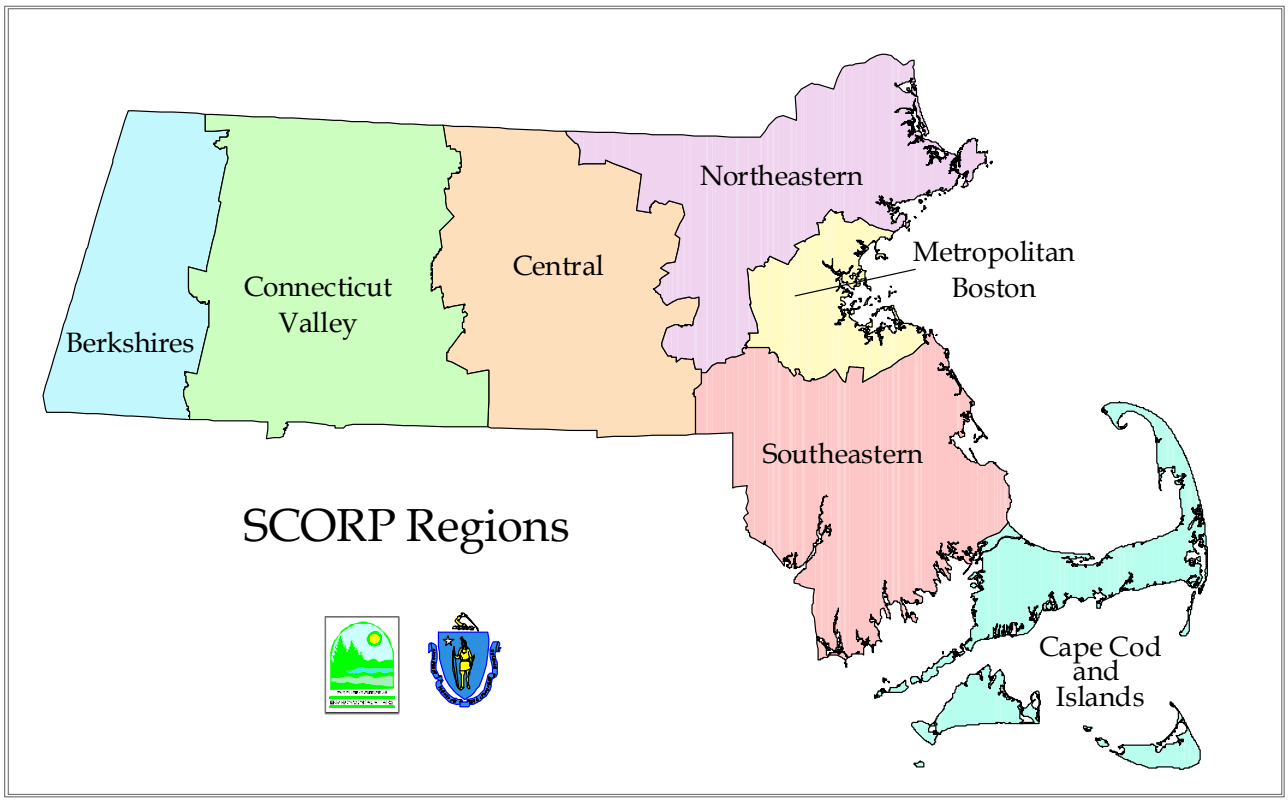
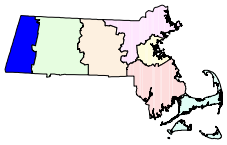


Figure 30. SCORP Planning Regions

Berkshire Region



Population and Resource Profiles

The Berkshires Region is the least populated area of the state, with fewer than 140,000 residents. The region possesses one major urban center in Pittsfield and several smaller but relatively populated areas, North Adams and the communities of Stockbridge and Lenox. These population centers contain over 61% of the total population, making for a surprisingly high number of urban residents. Historically a popular tourist region and summer residence for wealthy Bostonians, and more recently New Yorkers, the Berkshires today retain a healthy tourist trade and have moved from an economic system based on manufacturing to a more service-oriented economy, most notably in retail, health, and education. The Berkshires contain the state's major mountain ranges (hence the name), the Berkshire Hills and the Taconic Range along the western border, which includes Mount Greylock, the highest peak in the state. These two ancient mountain chains, though now low and leveled by eons of erosion and glaciation, still define the region and flank the valley floor carved by the Housatonic River. This region is both spectacular in its scenic vistas and rich in its plant and wildlife. The rare communities and abundance of species found here owe much not only to the topography and hydrology, including extensive wetlands, but also to the relatively rare limestone (calcareous) soils and parent bedrock.

In addition to these natural resources, the Berkshires have been blessed with human cultural and recreation resources, such as major portions of the Appalachian and Taconic Crest Trails, arts centers such as Tanglewood (summer home of the Boston Symphony), Jacob's Pillow Dance Theatre, and many prominent agricultural landscapes.

Supply in the Berkshire Region

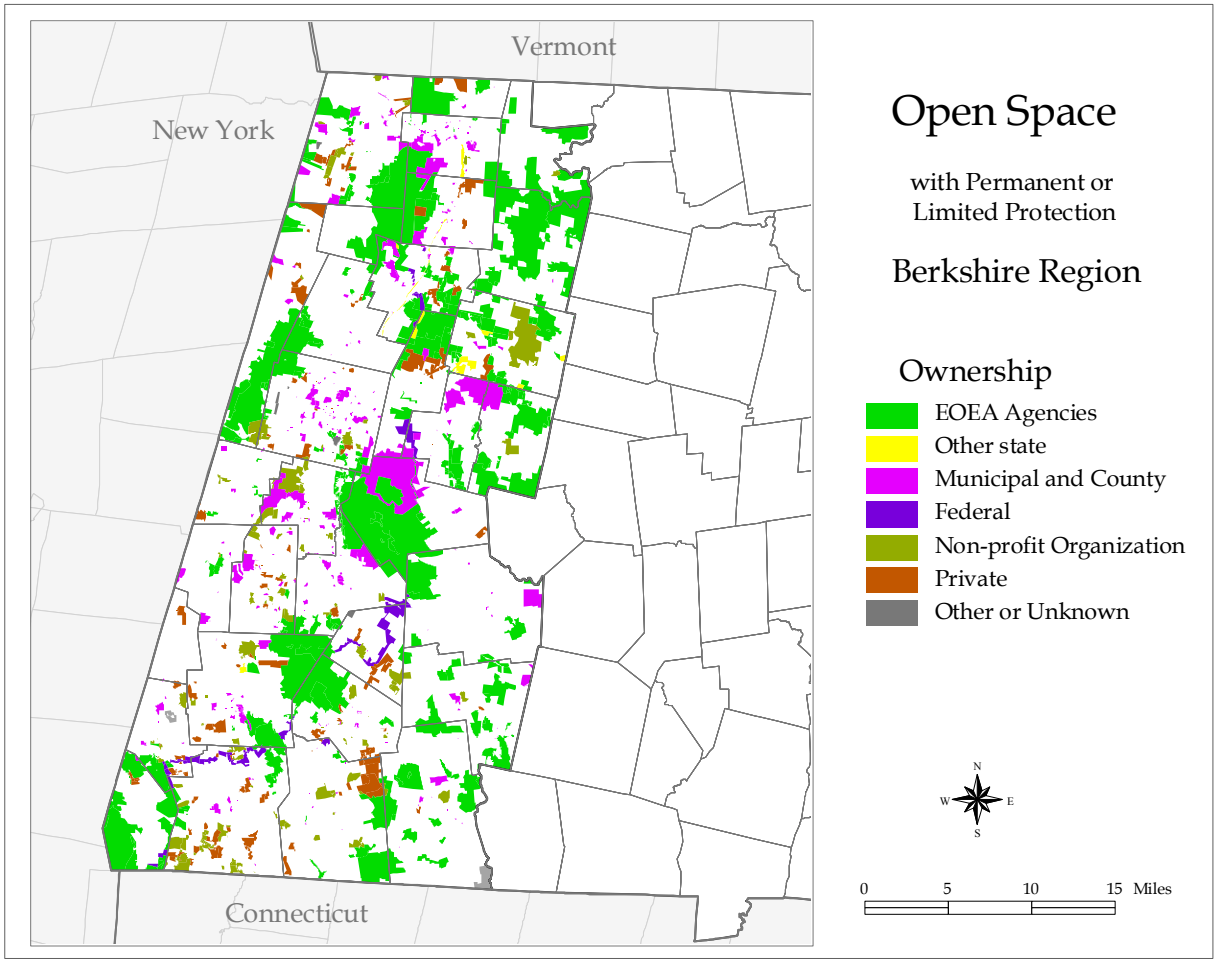


Figure 31. Protected Lands in the Berkshire Region

Regional Facilities and Protected Land Supply Patterns
In terms of the acreage of the above resources that are set aside for permanent protection, the Berkshire Region is also most fortunate, both in terms relative to other regions as well as in absolute terms. From the MassGIS inventory, it is estimated that approximately 192,853 acres of the region are in some form of recreation use, representing about 30% of the land area of the region, 3.5% of the land area of the state, and about 12% of the statewide inventory of protected land. In terms of people, this acreage produces a ratio of 1.26 acres per capita (or 1260 acres per thousand people). Of course, these resources are shared with a very large number of both in-state and out-of-state visitors, most particularly in the summer and fall seasons.

Ownership and Management of Open Space Lands
Of the almost 193,000 acres of recreation land, the state protects approximately 120,000, largely through its State Forests and Parks. Municipal and private recreation and conservation organizations all report around 20,000 acres. The federal government is a relatively inconspicuous player in this region, while the county ownership of protected lands in the Berkshires is nil.

The Berkshire towns report the fewest number of total sites – perhaps because of the larger size of sites. While the number of trail-based sites is higher than other categories, as expected, it is much lower than other regions, as is the number of wilderness sites. Indeed, even the number of sightseeing locations identified is lower than all other regions. It is possible that sites were undercounted, since Berkshire town governments are heavily volunteer, or that the number of sites is simply a function of low population density, or both.

Demand in the Berkshire Region

Activities
It is interesting to note that the experience levels by resource types in the Berkshires depart more widely from average values than in other regions, with virtually every resource category being either statistically significant in difference, or notably high or low as an absolute value.

Walking is the most favored activity in the Berkshires by a significant margin at 59.5%, more than five percentage points greater than the next most popular activity, swimming. The distance from the ocean dampens this interest only a little. The proximity of the mountains, however, makes hiking the third most popular activity, followed by fishing. Winter sports, e.g. cross-country and down hill skiing, although more popular in the Berkshires than in the Commonwealth as a whole, are still reportedly enjoyed less even in this region than other seasonal pursuits. The passive activities such as picnicking, photography and painting, and nature study have very strong participation rates here.

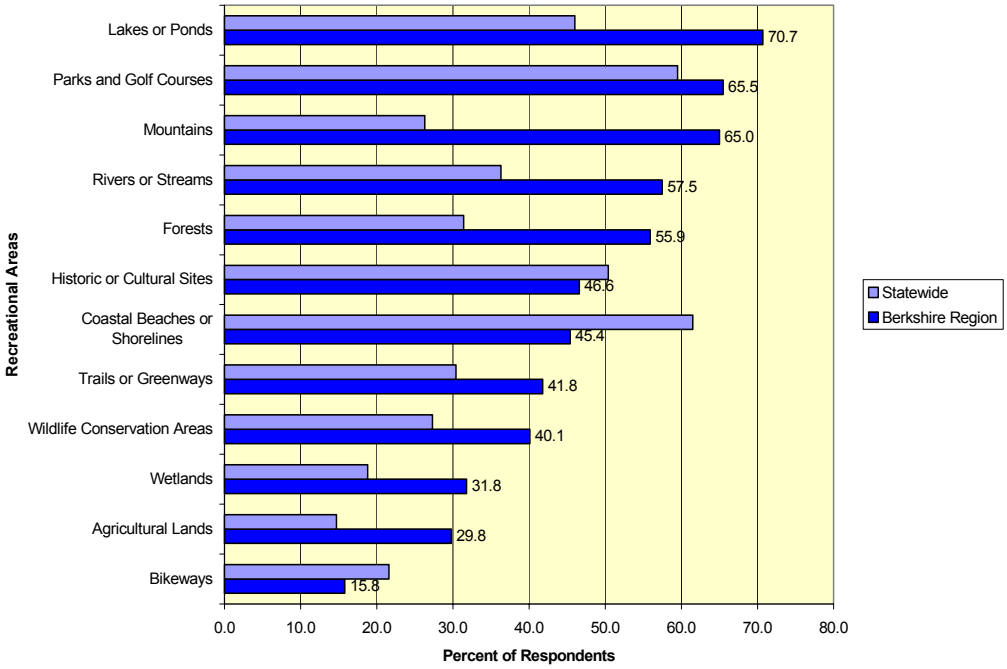
Road biking, roller-blading and skating, and running and jogging are all significantly less popular among residents of the Berkshires than statewide.

Figure 32. Participation Rates in Activities in the Berkshire Region †			
	RECREATIONAL AREA	Statewide (% of Respondents††)	Berkshires (% of Respondents††)
Field-Based Activities			
	Baseball	6.4	3.8
	Basketball	5.6	5.8
	Football	2.1	1
	Golfing	24.7	33.8
	Ice Skating (rink)	0.1	0
	Playground activity	26.1	29.9
	Soccer	2.6	0
	Tennis	2.2	2
	Toddler activity (at tot lots)	5.5	10.8
	Volleyball	2.5	1.2
Passive Recreational Activities			
	Photography / painting	5	4
	Picnicking	22.6	36.3*
	Sightseeing, tours, events	54	49.3
	Sunbathing	19.6	14.6
	Watch wildlife, nature study	21.7	32.6*
Trail-Based Activities			
	Biking (mountain)	12.5	9.5
	Biking (road)	15.8	8.2*
	Horseback riding	0.8	0
	Off-road vehicle driving	0.7	2.5
	Roller blading / skating	2.7	0.8*
	Running / jogging	3.9	0.8*
	Skiing (cross country)	3.2	8.4*
	Skiing (downhill)	7.6	5.8
	Snowmobiling	0.9	3
	Walking	56.5	59.5
Water-Based Activities			
	Boating (motorized)	8.2	11.8
	Boating (non-motorized)	7.8	11.2
	Canoeing, rafting	8.5	11.8
	Fishing	26.5	49.8*
	Hockey (natural water bodies)	0.3	0
	Ice skating (pond, lake or natural water bodies)	1.8	0.8
	Sailing	2.5	2.3
	Surfing	0.9	0
	Swimming	54.6	54.1
	Water skiing / jet skiing	1.9	2.2
Wilderness Activities			
	Camping	7.7	15.7*
	Hiking	30.8	51.4*
	Hunting	2.7	15.6*
† Based on respondents who indicate that they have visited recreational areas in the last 12 months.			
†† Percents may not equal 100 due to multiple response.			
* Difference with Statewide result is significant at the 90% confidence level.			

Resource Use

Berkshires residents report favoring lakes and ponds over all other categories of resources, although the categories of mountains and golf courses, neighborhood parks, playgrounds and tot lots are a close tie for second. Rivers and streams and forests are next in numbers of users, with bikeways (of which there are few dedicated ones) and agricultural lands are least widely used recreationally by residents themselves. These patterns appear to correlate well with the preferred activities above. While low relative to other resource use within the region, the use of wetlands and trails and greenways was higher than anywhere else statewide.

Figure 33. Experience with Recreational Areas in the Berkshire Region

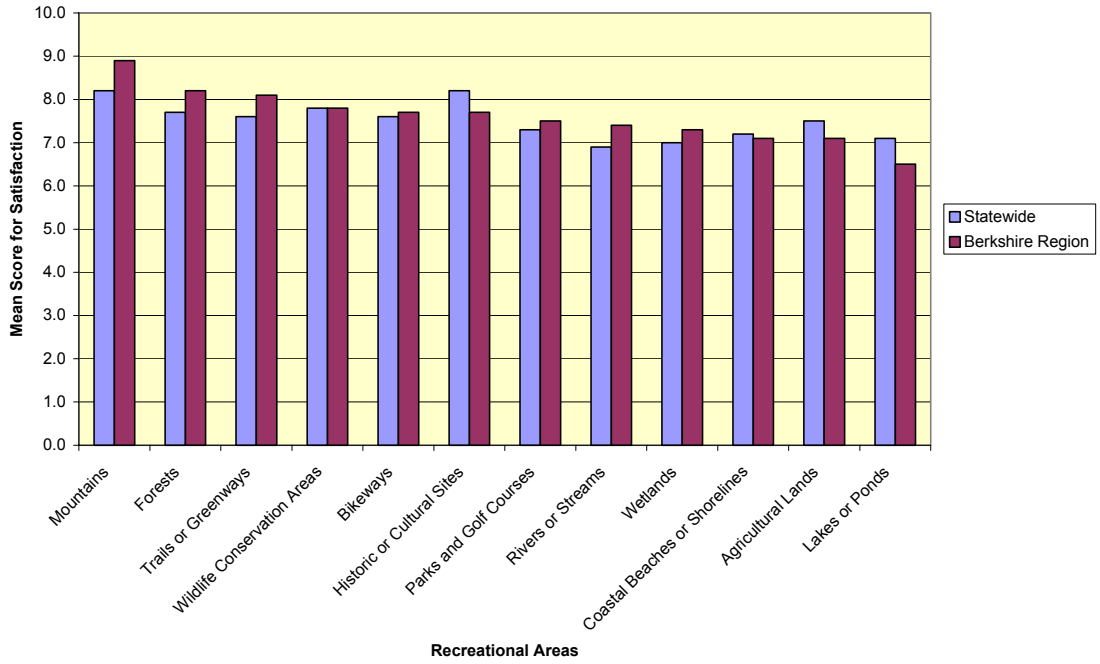


Needs in the Berkshire Region

Satisfaction Levels

Berkshire residents' values for satisfaction closely follow those of the state as a whole, with highest levels of satisfaction reported for mountain, forest and trail and greenway recreation areas. Somewhat lower than statewide levels of satisfaction were reported in this region for Wildlife Conservation areas and Lakes and Ponds. Lakes and Ponds were the resource areas where Berkshire residents who use these facilities were least satisfied overall.

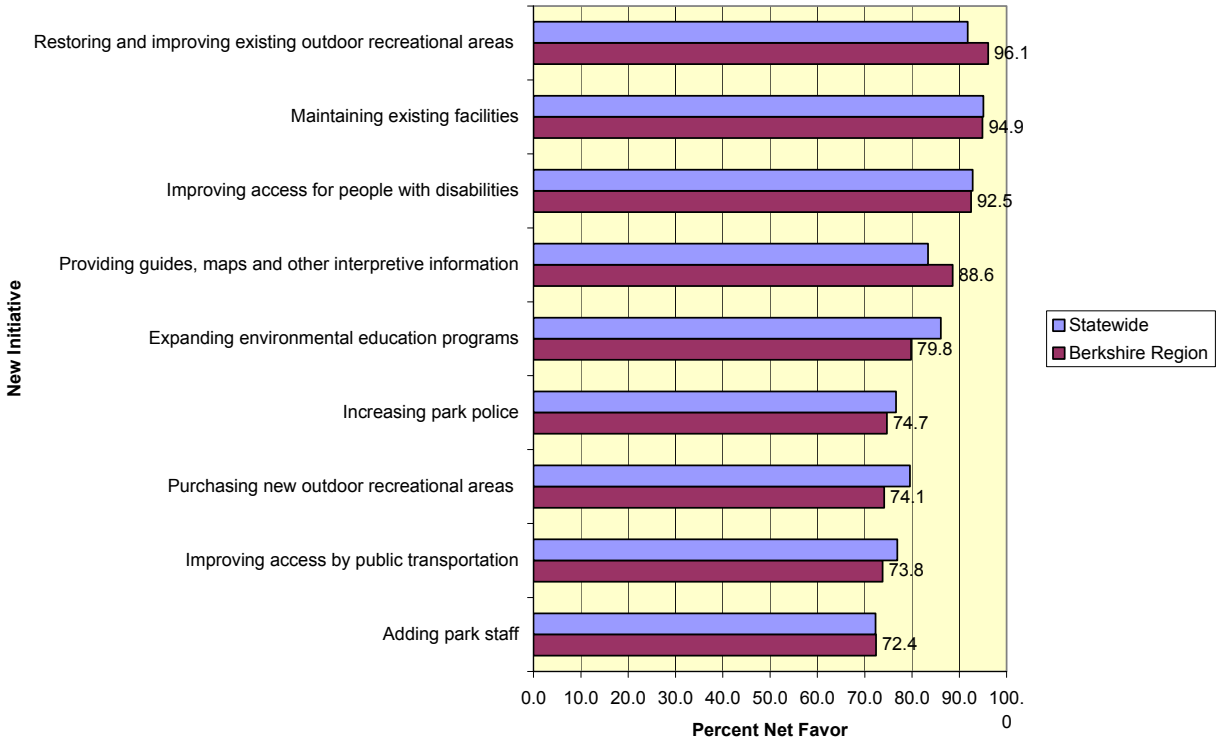
Figure 34. Satisfaction with Recreational Areas in the Berkshire Region



Funding Preferences

Restoration and improvement of existing areas is ranked first in the Berkshires for future investments. Access improvements for persons with disabilities were close to these, while new acquisitions were lower, as well as the lowest in the state. This decreasing emphasis on acquisition for new recreation areas is understandable for the region that has the highest percentage of available recreation lands and one of the higher rates of tourist visitation. Lowest preference here was given to public transportation access and adding park staff.

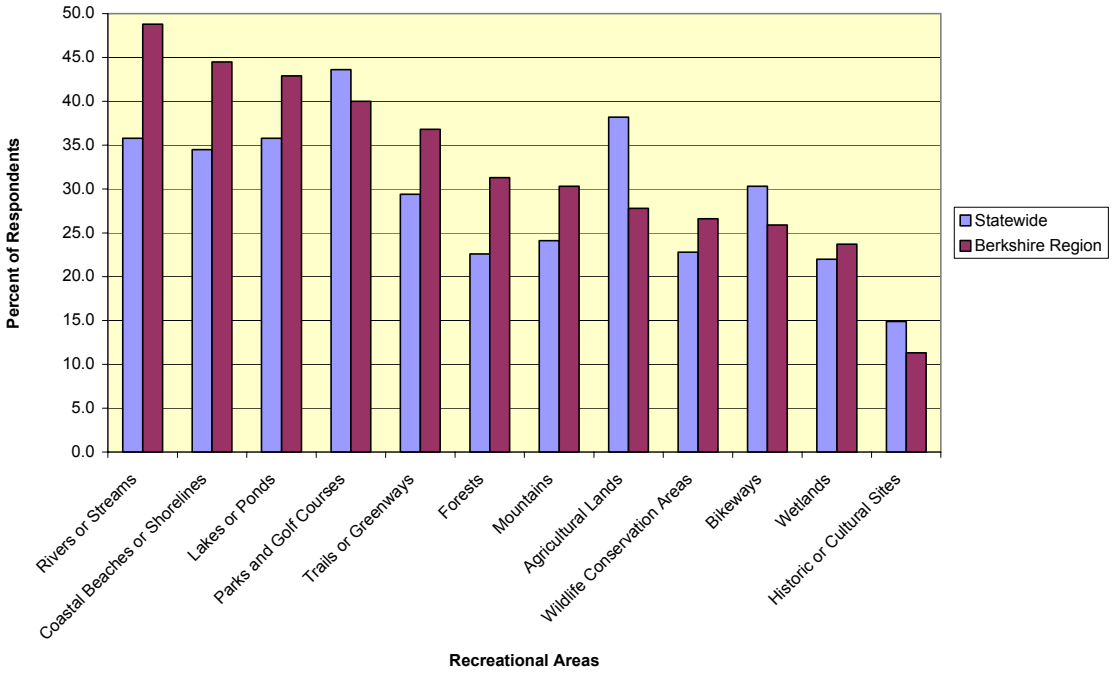
Figure 35. Funding New Inititaves in the Berkshire Region

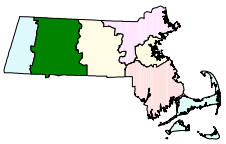


Facilities Needs

Residents expressed the greatest need (desire) for more water-based activities, both swimming and fishing, implying a greater need for access to lakes and ponds, rivers and streams and coastal beaches and shorelines. Substantial interest is shown in each of the 5 major categories of activity: trail-based, field-based, water-based, wilderness, and passive, with the latter two types identified as the least lacking in this region. This conclusion makes intuitive sense, given the resource supply picture.

Figure 36. Inferred Need for New Recreational Areas in the Berkshire Region





Population and Resource Profiles

Composed of three counties, Franklin to the north, Hampden to the south and Hampshire in the center, this region changes from a largely urban population in the southern and central counties to a much more rural population in the north. The major urban centers are Springfield, Holyoke and Chicopee, the Northampton and Amherst area, and Greenfield. A strong manufacturing base in these urban centers has been supplemented with a move toward retail, education and finance industries. The region is especially known for the significant number of colleges and universities, most notably in the so-called five-college area of Northampton and Amherst in the central "Pioneer Valley". The northern region retains much of its agricultural past.

The Connecticut Valley area contains the Holyoke mountain range, the largest river and drainage basin in Massachusetts, the Connecticut River watershed, and a major historic and scenic state Route 2 known as the Mohawk Trail. The three distinct urban concentrations noted above arise from the geomorphology of this region. Lying within and at the edges of the highly fertile and flat floodplain of the valley, these cities follow the three distinct physical subregions of the valley. Sculpted in large measure by the location of the Holyoke Range and the Pocumtuck Range (Sugarloaf and Mt. Toby), these low mountains divide the northern and southern Connecticut River Valley into thirds. Bounding the valley to the east, the Central Highlands rapidly rise almost a thousand feet above the valley floor, while the Berkshire Hills rise more gradually to the west. A substantial part of the region is comprised of the hill towns, giving the region yet another subdivision of hill versus valley ecoregions, and town cultures.

The Connecticut Valley SCORP Planning Region encompasses several sub-ecoregions as identified by the federal Environmental Protection Agency (EPA) and state DEP, including the Berkshire Transition, the Vermont Piedmont, part of the Worcester Plateau and the Lower Worcester Plateau, as well as the Connecticut River Valley itself. In addition to the three counties noted above, the region is also served by two Regional Planning Agencies (RPA), the Franklin County RPA and the Pioneer Valley RPA. Some of the data included in this report obtained from the "Massachusetts Land Policy Plan for the Next Decade" by RKG Associates, and more so in the prior 1978 and 1988 SCORP reports, is based upon these RPA boundaries.

Supply in the Connecticut Valley Region

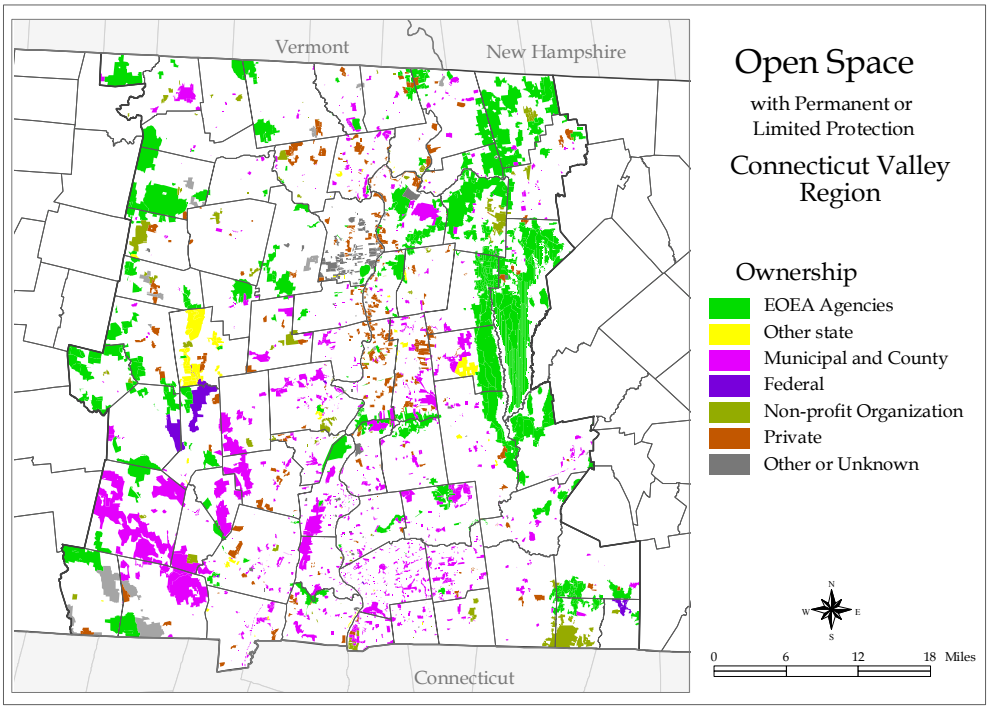


Figure 37. Protected Lands in the Connecticut Valley Region

Regional Facilities and Protected Land Supply Patterns
As noted in the statewide summary, the Connecticut region is the largest of the SCORP Planning Regions in area, and has the largest amount of open space and recreation acreage. However, a regional comparison of this land as a percentage of total land area in the region reveals that the Connecticut ranks only fourth highest among the planning regions. Moreover, most of the protected open space in this region is owned or protected for water supply purposes than in any other part of the state. This fact reflects not only the presence of much of the MDC Quabbin Reservoir watershed land in the towns of New Salem, Pelham, Belchertown and Ware, but also major municipal watersheds lands, including the surface water supplies for Springfield and Holyoke. Unfortunately, it is reported that only 66% of municipally owned watershed lands are permanently protected open space. Further, because of the great caution taken to avoid degradation of drinking water quality, much of this land area is presently managed to exclude all human, or at least all recreational activities. Certainly water quality must remain the primary purpose of protection, but developing methods to manage these extensive lands for limited, low impact recreation activities could be considered.

Ownership and Management of Open Space Lands
A larger percentage and acreage of municipal and non-profit lands are present in this region than in other parts of the state. The municipal ownership pattern relates in part to the drinking water supply resources just noted, but also to significant municipal holdings for facility-based recreation lands and holdings in the Holyoke Range by the Towns of South Hadley and Hadley, and by the Towns of Amherst, Pelham, and Montague. In addition, Springfield, Wilbraham, Longmeadow and East Longmeadow have extensive smaller parcel holdings, substantially in golf course, neighborhood park, playground and tot lot resource type. The non-profit holdings reflect both the high level of farm participation in the Agricultural Preservation Restriction (APR) program funded by EOEA's Department of Food and Agriculture, and the biodiversity interest of land trusts in this region.

Another profound element of the protected land supply pattern in this region is the extensive state forest and wildlife management area system extending north from Mt. Toby, through the Wendell State Forest, and up through Erving, Northfield and Warwick. Recent major additions to this inventory include the 1460 acre Montague Plains Wildlife Management Area, the Mt. Tully Wildlife Management Area in Orange, and 660 acre French King Gorge acquisitions in Erving, Gill, and Northfield.

Demand in the Connecticut Valley Region

Activities
A second tier of activities having moderate participation rates for the Connecticut Valley Region include fishing (39.7%), golfing and picnicking (26.6 and 26.5% respectively), and playground activities. Once again, understanding the neighborhood park and playground activities as distinct from golf in actual activity patterns is important. This observation serves as a segue to the use of the resource base in this region.

Figure 38. Participation Rates in Activities in the Connecticut Valley Region †

	RECREATIONAL AREA	Statewide (% of Respondents††)	Connecticut Valley (% of Respondents††)
Field-Based Activities			
	Baseball	6.4	8.2
	Basketball	5.6	6.8
	Football	2.1	2.5
	Golfing	24.7	26.6
	Ice Skating (rink)	0.1	0.5
	Playground activity	26.1	25.8
	Soccer	2.6	4.9
	Tennis	2.2	3.6
	Toddler activity (at tot lots)	5.5	7.4
	Volleyball	2.5	0.9
Passive Recreational Activities			
	Photography / painting	5	4.5
	Picnicking	22.6	26.5
	Sightseeing, tours, events	54	54.9
	Sunbathing	19.6	12.8*
	Watch wildlife, nature study	21.7	29
Trail-Based Activities			
	Biking (mountain)	12.5	18.9
	Biking (road)	15.8	13.7
	Horseback riding	0.8	0.5
	Off-road vehicle driving	0.7	0
	Roller blading / skating	2.7	3.1
	Running / jogging	3.9	2.5
	Skiing (cross country)	3.2	3.8
	Skiing (downhill)	7.6	5.8
	Snowmobiling	0.9	1.7
	Walking	56.5	44.5*
Water-Based Activities			
	Boating (motorized)	8.2	10.6
	Boating (non-motorized)	7.8	9.6
	Canoeing, rafting	8.5	9.2
	Fishing	26.5	39.7*
	Hockey (natural water bodies)	0.3	0
	Ice skating (pond, lake or natural water bodies)	1.8	1.7
	Sailing	2.5	1.6
	Surfing	0.9	0
	Swimming	54.6	52.7
	Water skiing / jet skiing	1.9	1.3
Wilderness Activities			
	Camping	7.7	9.3
	Hiking	30.8	41.9*
	Hunting	2.7	2.9

† Based on respondents who indicate that they have visited recreational areas in the last 12 months.

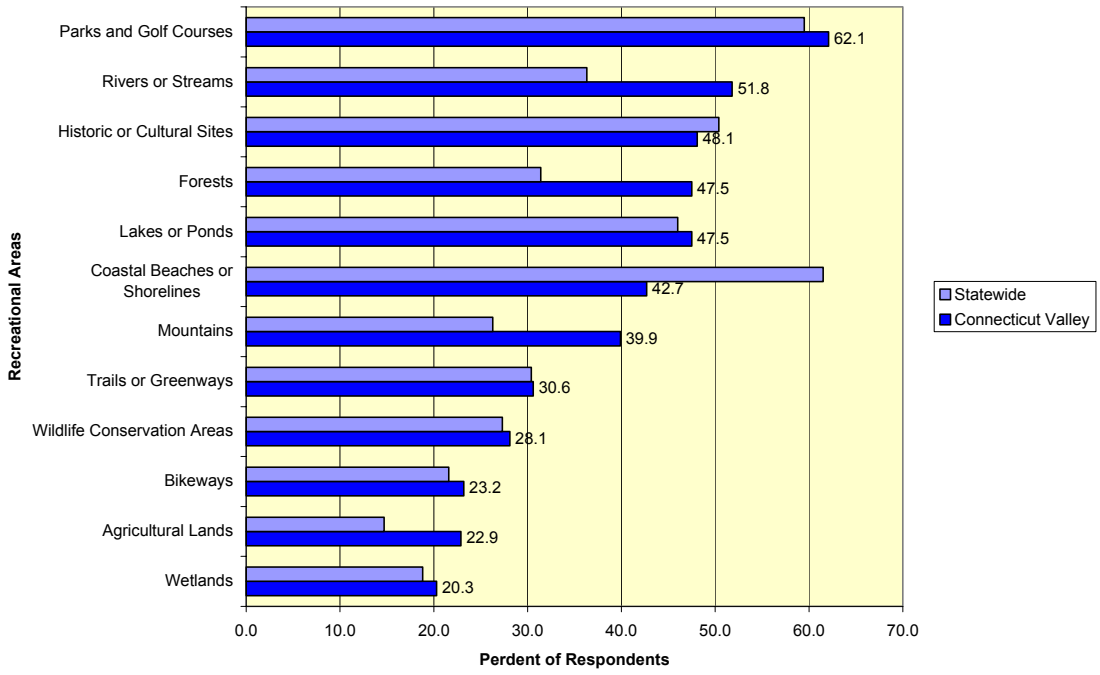
†† Percents may not equal 100 due to multiple response.

* Difference with Statewide result is significant at the 90% confidence level.

Resource Use

The collective group of golf courses, neighborhood parks, playground, and tot lots, as just noted, is the most heavily used of the regions resources when aggregated. This pattern is logical, in light of the substantial urban concentrations noted above. Closely following this resource use are rivers and streams, historic and cultural sites, lakes and ponds, forests, coastal beaches and shorelines, and mountains, all with 40% participation rates or greater. These observations track well with the above activity patterns, indicating that rivers and streams partially fulfill the swimming demands of the region, supplemented by trips to the coast and local ponds.

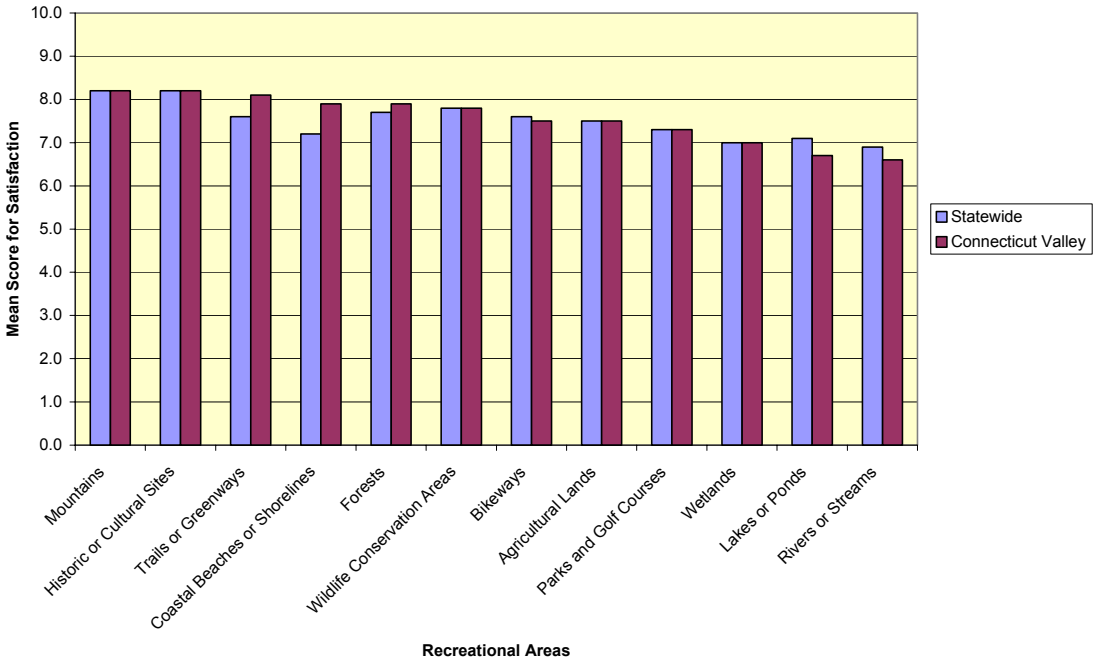
Figure 39. Experience with Recreational Areas in the Connecticut Valley Region



Satisfaction Levels

The level of satisfaction reported by Connecticut Valley residents shows more variation from those of the state as a whole than do other regions, with very low levels of dissatisfaction reported for coastal beaches and shorelines, and for historic and cultural sites. The highest levels of dissatisfaction in this region were reported

Figure 40. Satisfaction with Recreational Areas in the Connecticut Valley Region



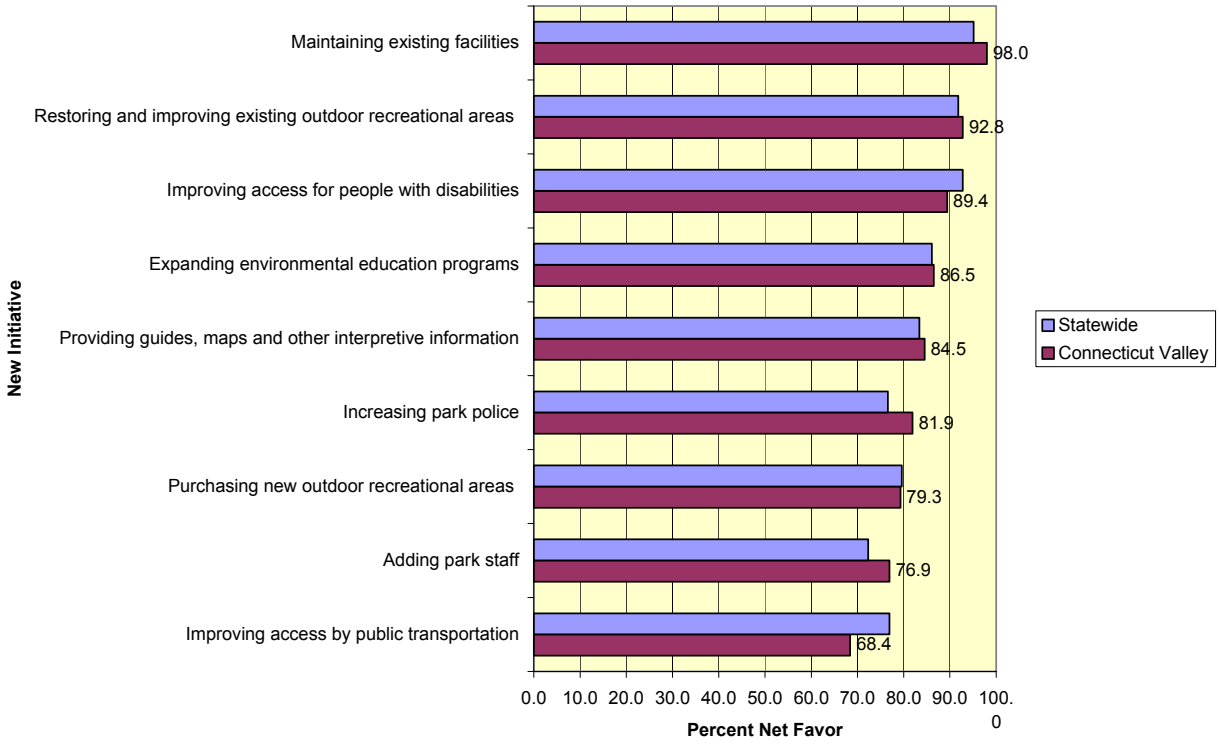
for golf courses and parks, then for lakes and ponds, followed by rivers and streams, and finally for bikeways. Residents report being most satisfied with historic and cultural sites, mountains, and trails and greenways resources. Somewhat lower than statewide levels of satisfaction were reported in this region for rivers and streams, and lakes and ponds. Rivers and streams were the area where Connecticut Valley Region residents who use these facilities were least satisfied overall.

Funding Preferences

Preferences for new funding initiatives showed both the highest and lowest values in the state, giving this region the clearest articulation of preferences of all regions. Little need was felt for improved access here through public transportation, implying that people either have adequate private access by auto, bike or foot, or are nearby the desired facilities and resource areas, or both. The strongest preference (98%) was declared for maintaining existing facilities, perhaps a reflection of the popularity of neighborhood park facilities, which tend to have high maintenance requirements. Here again, the respondents do not see the connection of maintenance to the need for additional park staff.

One contradiction to note in the Connecticut Valley Region is the relatively low priority given to new land acquisition for recreation purposes (79.3%) versus the very high need for additional land protection in the Valley. This was also noted by The Nature Conservancy and the state's Natural Heritage and Endangered Species Program in "Our Irreplaceable Heritage". The conservation importance here stems both from the relatively high species diversity found in the valley and the relatively low amount of land protection in the valley floor which is of great importance to that diversity. This point illustrates the need to ensure a conservation focus that is complementary to the recreation one. Nonetheless, the percentage of respondents who favor new land acquisition, although lower in priority than other recreation needs, still represents more than a super-majority of those over 18 years old.

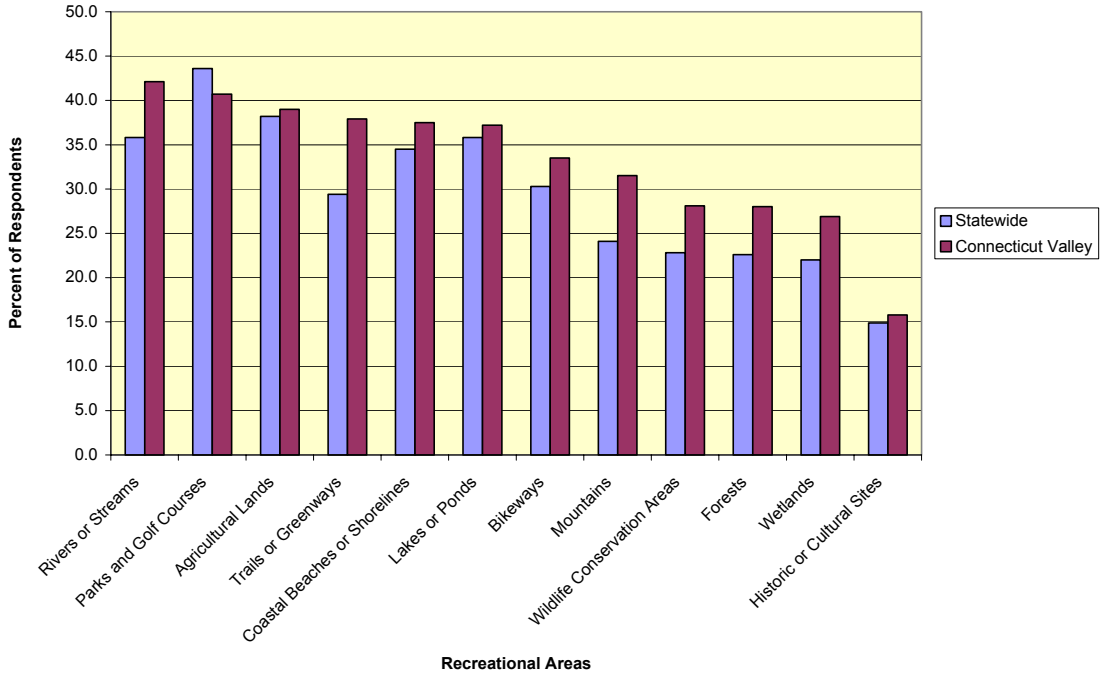
Figure 41. Funding New Initiatives in the Connecticut Valley Region



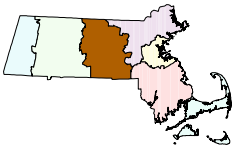
Facilities Needs

In contrast to demand (or present use patterns), respondents in this region place the highest priority for new facilities on road biking (14.5%), walking (13.9%), swimming (13.8%), playground (11.3%), hiking (10.0%), and mountain biking (10.3%). A middle tier of priorities includes golfing (8.2%), tennis, picnicking and fishing (5.5%), and camping (5.3%). These facilities needs are converted into "Inferred" resource area needs, i.e. those natural or developed areas that can supply, and are conducive to, the desired recreation activities. Highest among these for the Connecticut Valley Region are rivers and streams, then parks and golf courses, then agricultural lands, followed by trails and greenways, and finally lakes and ponds. Note also that the regional needs for hiking, mountain biking (10.3%), and cross-country skiing (4.1%) rank higher than in any other region.

Figure 42: Inferred Need for New Recreational Areas in the Connecticut Valley Region



Central Region



Population and Resource Profiles

Central Massachusetts is made up of one county (the largest county in land area in Massachusetts) and contains the state's second most populous city, both of which possess the same name, Worcester. This region also contains several smaller urban centers in Leominster, Fitchburg and Gardner. Manufacturing still provides employment for about 25% of the population, while retail, health, and education services account for a major portion of the non-manufacturing economy. In addition to these more historical patterns, the post-1950 pattern of development has seen the I-495 beltway envelop the previously rural hinterland and even the mill towns in the eastern part of the county. Here, major new population growth has spurred and been spurred by both residential and light industrial growth, as well as office and strip mall retail development. This suburban growth explosion has occurred without a corresponding set-aside of recreation and conservation lands for the new "communities" that have emerged. Consequently, these communities feel both the fiscal effects of their recent growth and the inability to meet recreation needs at the same time. This suburban and highway-driven commuter pattern of dispersed settlement is presently working these same forces upon the towns ringing the City of Worcester, and the Blackstone Valley.

A further important settlement dynamic relating to recreation resources is the closure and reuse of the former Ft. Devens Department of Defense facility. While the core areas of this "new town" lie in the adjoining Northeastern SCORP Region, this land use conversion provides the Central Region with several thousands of acres of conservation lands in the Oxbow National Wildlife Refuge along the Nashua River, in the Towns of Lancaster and Harvard. This federal refuge adjoins the state DFWELE's Bolton Flats Wildlife Management Area.

The central portions of this region contain the state's major source of surface drinking water: the MDC's Quabbin, Wachusett, and Sudbury reservoirs. This region also possesses several significant uplands, most notably the southern range of the Monadnocks, including Mount Wachusett and Mount Watatic.

Supply in the Central Region

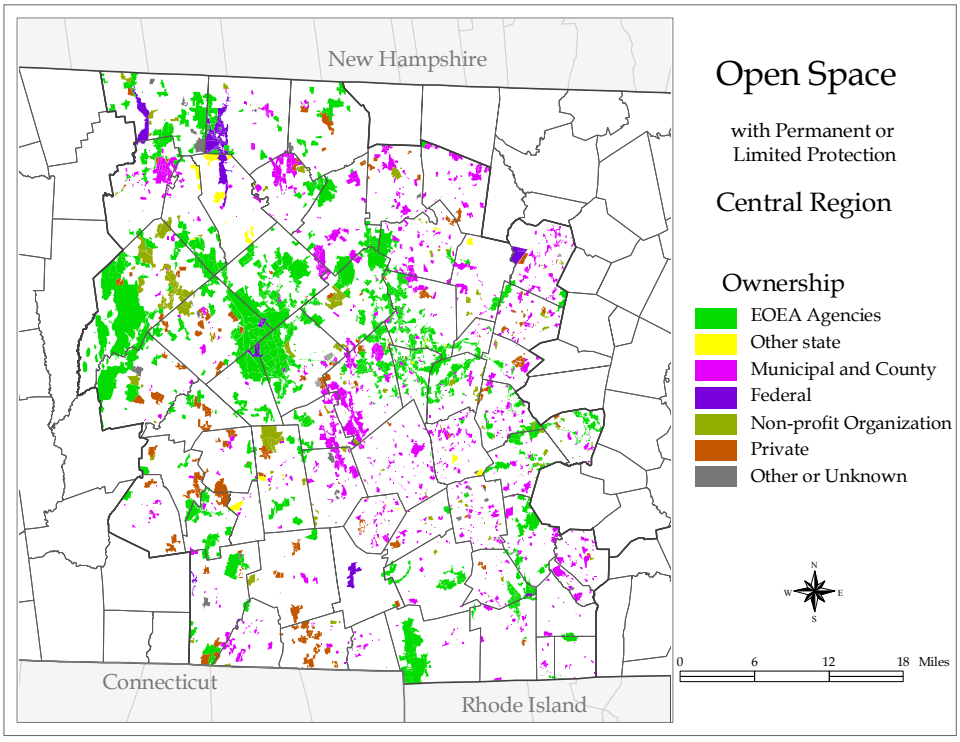


Figure 43. Protected Lands in the Central Region

Regional Facilities and Protected Land Supply Patterns
Several large protected land areas have been assembled in the last century within this region. These areas represent a tremendous resource to the region, and one of the great land protection achievements in Massachusetts. Yet several parts of Worcester County remain without significant protected land holdings. Among the most regionally significant assemblages are: the easterly portion of the MDC Quabbin Reservoir watershed in the towns of Petersham and Hardwick; the MDC Ware River watershed parcels, which seasonally supplement the Quabbin flows, located in the towns of Barre, Hubbarston, Oakham, and Rutland; and the DEM Wachusett Mountain Reservation in Princeton and Leominster. Continuing to the east, the towns of Holden, Sterling, West Boylston and Princeton also have significant holdings of MDC Wachusett Reservoir watershed lands. Numerous other DEM sections of state forest, such as the Leominster and Rutland State Forest, and DFWELE Wildlife Management Areas, are very much a part of the linking fabric of this protected landscape.

In addition to these towns that share in regionally important preserves, quite a number of individual towns with substantial protected open space resources include Wales, Brookfield, New Braintree, Spencer, Leicester, Paxton, Holden, Douglas, Grafton, Westminster, Gardner, Royalston and Lunenburg.

Ownership and Management of Open Space Lands
The vast majority of the above supply of protected lands was acquired and is held by the Commonwealth of Massachusetts. However, some notable exceptions occur on a localized basis. For instance, federal ownership is notable in the towns of Royalston, Winchendon and Templeton, as well as in Brimfield and Holland, and Oxford. These facilities are managed primarily for flood control, with associated wildlife benefits. The federal presence in the Blackstone Valley, through the National Heritage Corridor, creates a unique entity within this region. In this case, the vast bulk of land remains in private ownership, with more focused public facilities, such as interpretive centers or exhibits, bike path segments, and signs. This kind of resource management is well suited to historic and cultural resources, especially when spread over a sub-region versus a localized site.

Municipal ownership is very significant in Gardner, and also in Paxton, Holden and Leicester where the City of Worcester has acquired significant surface water and watershed protection holdings.

Private non-profit ownership is second only to the state's in this region, showing substantial clustering of protected lands in a large number of towns, including, Charlton, Wales, Sturbridge, Dudley, Spencer, Petersham, West and North Brookfields, and Princeton.

There is a clear dominance of land protected for watershed purposes in this region, even more so than in the Connecticut Valley Region. The implication of this fact for recreation interests is, perhaps, obvious. Watershed lands are most often managed exclusively for water supply protection interest, which often precludes recreation use. Because public health and safety are of interest, this cautious approach to land management is understandable. However, this region, more than any other, must come to grips with this dilemma, either in the form of increased protection for other types of resources more compatible with recreation, or in carefully revised watershed management strategies.

Demand in the Central Region

Activities
In the Central Massachusetts Region, swimming (61.4%) is the activity most widely engaged in by residents, even more so than in any other region of the state. Indeed, with the exceptions of swimming and walking on Cape Cod and the Islands, this was the highest single participation value recorded in the survey.

Also highly popular in this county are walking, at 58.6% participation, and sightseeing, tours and events with 55.9% (highest in the state). These three activities dominate the recreation picture for Central Massachusetts.

Also important, in terms of the number of individuals served, are those activities reporting between 25 and 50% participation rates, including hiking, fishing, picnicking, playground activity (the second highest of the regions at 31.8%), wildlife and nature study, and golfing (second highest rate statewide), in that order.

This region also expressed the strongest participation rate statewide in boating, especially non-motorized. The following activities rated highest in Central Massachusetts, among the regions, although the absolute values are low: hockey (1.1%), water skiing and jet skiing (3.1%), photography and painting (7.3%). Participants in Central Massachusetts enjoyed ice-skating (2.2%) and camping (10.7%) at a rate that was the second highest

among all the regions.

This activity pattern shows distinctive interests for the region. Taken in the aggregate as types of activity, this region shows a broad interest in all types of recreation, with at least one significant activity noted in each of the field-based, water-based, trail-based, passive and wilderness activities. The greatest emphasis would appear to be found in Passive Recreation Activities group. The remaining groups have a roughly comparable distribution.

Yet another distinctive pattern in the recreation activities of Central Massachusetts residents is their greater willingness to travel for (or their greater distance from) certain types of recreation. Unlike Berkshire and Cape and Island residents, Central Region residents take only the same number of trips as the average of all state residents to access rivers and streams, lakes and ponds, wetlands, bikeways, wildlife areas, mountains, agricultural lands and historic and cultural site, but twice the number of trips to forests. Residents of this region also visit coastal beaches and golf courses, playgrounds, neighborhood parks and tot lots significantly less frequently than most state residents. However, residents here travel farther than those of any other region (the higher Berkshire value in this category represented too few response to yield meaningful statistical results) to reach coastal beaches and shorelines (101 miles), bikeways (68 mi.), trails and greenways (35 mi.), wildlife conservation areas (24 mi.) and historic and cultural sites (35 mi.). These residents also travel significantly more that the state average to reach wetlands and agricultural lands, but less than average for rivers and streams.

Figure 44. Participation Rates in Activities in the Central Region †			
	RECREATIONAL AREA	Statewide (% of Respondents††)	Central (% of Respondents††)
Field-Based Activities			
	Baseball	6.4	4.1
	Basketball	5.6	3.2
	Football	2.1	0
	Golfing	24.7	29.4
	Ice Skating (rink)	0.1	0
	Playground activity	26.1	31.8
	Soccer	2.6	1.0*
	Tennis	2.2	2
	Toddler activity (at tot lots)	5.5	6.2
	Volleyball	2.5	1.3
Passive Recreational Activities			
	Photography / painting	5	7.3
	Picnicking	22.6	33.4*
	Sightseeing, tours, events	54	55.9
	Sunbathing	19.6	21.1
	Watch wildlife, nature study	21.7	29.8*
Trail-Based Activities			
	Biking (mountain)	12.5	6.1*
	Biking (road)	15.8	12.9
	Horseback riding	0.8	1.7
	Off-road vehicle driving	0.7	1.4
	Roller blading / skating	2.7	1.5
	Running / jogging	3.9	2.7
	Skiing (cross country)	3.2	5.4
	Skiing (downhill)	7.6	9.7
	Snowmobiling	0.9	0
	Walking	56.5	58.6
Water-Based Activities			
	Boating (motorized)	8.2	11.6
	Boating (non-motorized)	7.8	11.6
	Canoeing, rafting	8.5	10.1
	Fishing	26.5	33.7*
	Hockey (natural water bodies)	0.3	1.1
	Ice skating (pond, lake or natural water bodies)	1.8	2.2
	Sailing	2.5	3
	Surfing	0.9	0.5
	Swimming	54.6	61.4*
	Water skiing / jet skiing	1.9	3.1
Wilderness Activities			
	Camping	7.7	10.7
	Hiking	30.8	43.0*
	Hunting	2.7	4.6
† Based on respondents who indicate that they have visited recreational areas in the last 12 months.			
†† Percents may not equal 100 due to multiple response.			
* Difference with Statewide result is significant at the 90% confidence level.			

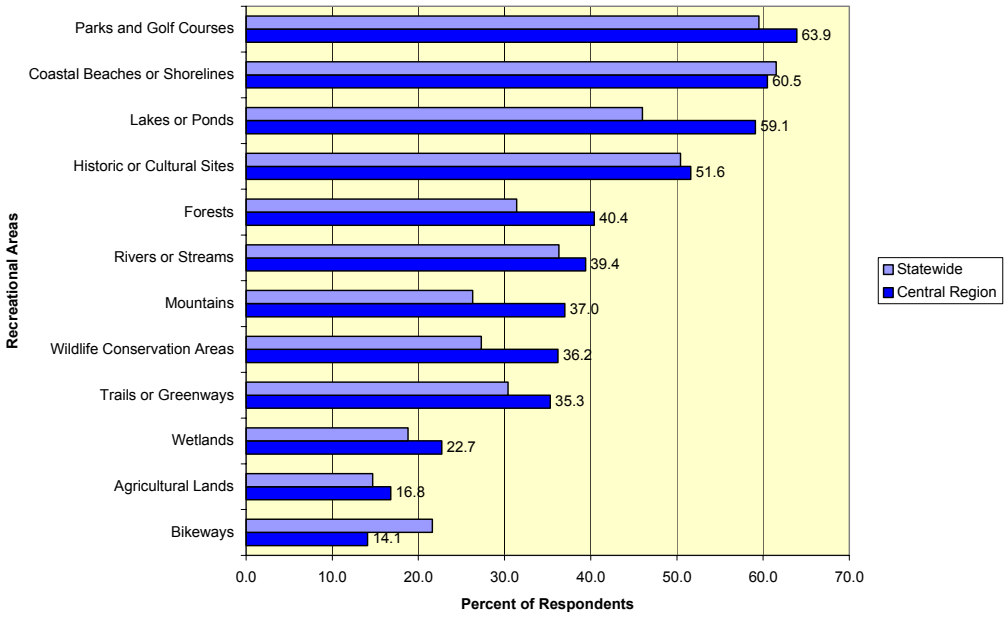
Resource Use

The above activity preferences clearly signal the presence and interest in water resources, both in winter and summer. The attraction of lakes and ponds is stronger than in most other regions, by far, in the Central Region at almost 59 %, versus a statewide average of 46%.

However, the most frequently mentioned preference in this region was for golf courses, neighborhood parks, playgrounds and tot lots (63.9%). Given the infrequent but broad use of these facilities noted above, this pattern suggests that facilities are nearby and desired, but may be over capacity, under maintained or both. Coastal beaches and shorelines (60.1%) are next in the order of popular preference for resource types in the Central Region, with lakes and ponds (59.1%) and rivers and streams (39.4%%) also rating strongly. Historic and cultural sites (51.6%) and forests (40.4%) are also in considerable demand (actual present use) in this region, with mountains (37%), wildlife areas (36.2%), and trails and greenways (35.3%) having moderate usage. Recall from the statewide comparisons that the highest frequency of use of forests is in the Central Region rather than the western regions.

The least used resources by Central residents are bikeways (relatively few exist nearby) and agricultural lands. In the case of bikeways, the low usage may reflect both the small number of dedicated bike facilities, and perhaps to a lesser degree, the very hilly terrain. Since satisfaction levels reported below are high, crowding or poor maintenance are clearly not factors. The unexpectedly low agriculture number is harder to interpret. It may suggest that there is in fact less agricultural activity remaining in Central Massachusetts than is generally supposed, or perhaps simply that residents may more readily take its presence for granted, not seeking this experience either locally or further afield as a recreation pursuit.

Figure 45. Experience with Recreational Areas in the Central Region



Needs in the Central Region

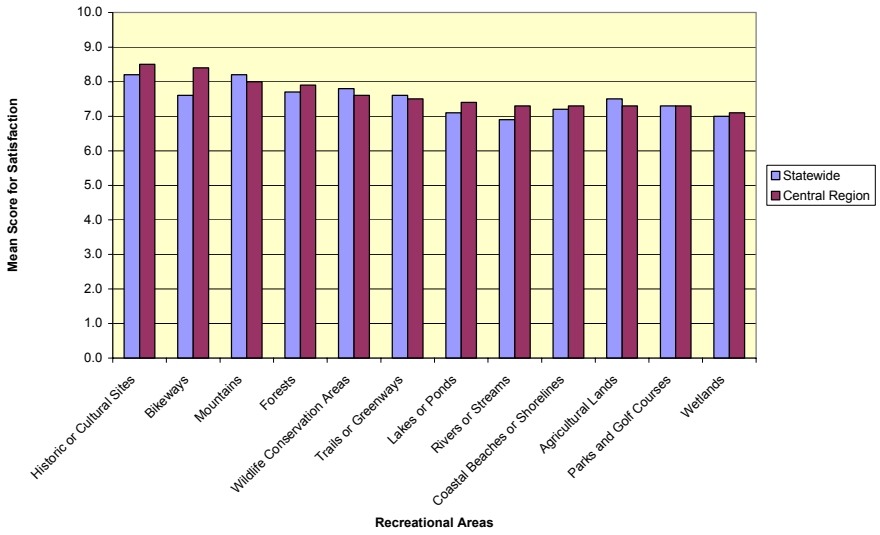
Satisfaction Levels

Historic and cultural sites receive the highest satisfaction levels for the Central Region and the highest statewide. Bikeways were also high in satisfaction. Lower levels of satisfaction are reported with wetlands, rivers and streams, lakes and ponds, coastal beaches, agricultural lands and golf courses, neighborhood parks, playgrounds and tot lots. The strongest dissatisfaction ratings are given for trails and greenways, agricultural lands, and wildlife conservation areas.

No dissatisfaction at all was reported for historic and cultural sites, albeit residents reported traveling longer distance than most for such experiences. Apparently, the lower frequency of visitation and distance are in line with the expectations of residents in this region. Clearly, this is much less the case with coastal beaches and shorelines, where the same factors of even longer distances but high frequency result in high

levels of dissatisfaction.

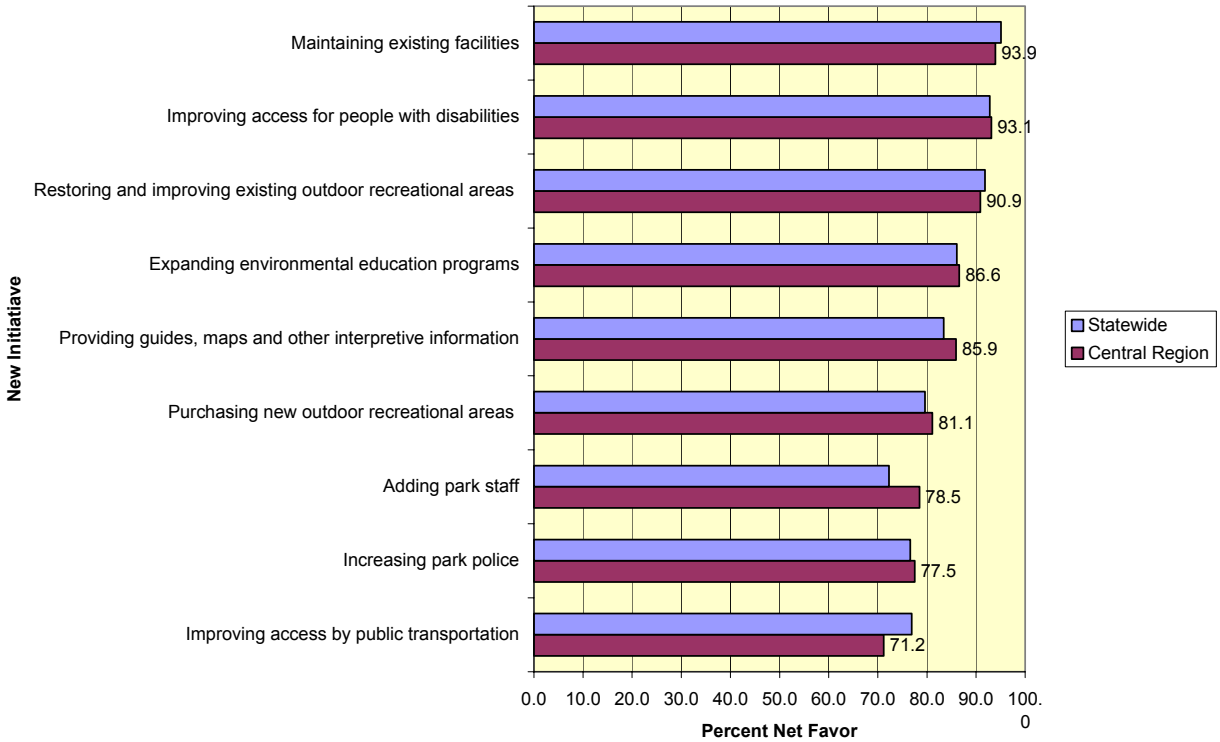
Figure 46. Satisfaction with Recreational Areas in the Central Region



Funding Preferences

The overall pattern of preferences among Central Region residents regarding new funding initiatives follows that of the statewide patterns. However, feeling was strongest in this region for supporting acquisition of new recreation areas (81.1%), and the gap between this alternative and the highest ranked alternative, maintaining existing facilities (93.9%), was the smallest difference statewide. Feeling is also stronger in the Central Region in support of additional park staff (78.8%), significantly higher than other regions, although this item still ranks relatively low in the priority ranking.

Figure 47. Funding New Initiataives in the Central Valley Region



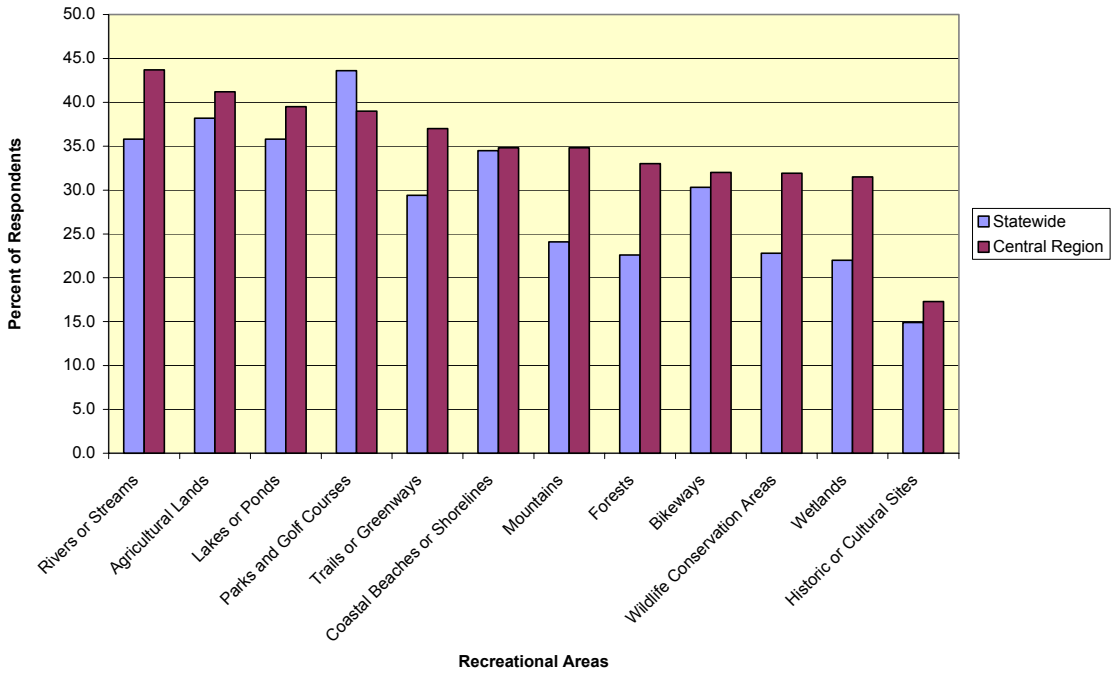
Facilities Needs

When asked what new facilities would most benefit them, residents of the Central Region showed the highest interest in facilities for walking (16.4%), swimming (17.0%), hiking (14.4%, the strongest interest in the state), road biking (12.1%), and playground activity (10.2%).

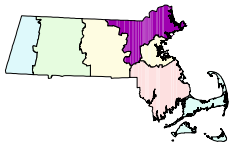
A second tier of facilities interest is noted among relatively moderate percentage of Central Region respondents for mountain biking (8.5%), golfing (8.3%), picnicking (5.3%), camping (4.8%) and basketball (4.0%). Almost all categories, except off-road vehicle driving, football, sunbathing, photography and painting (all 0.0%), and sailing and pond ice-skating (both 0.3%), volleyball (0.4%), and pond hockey (0.7%) reported at least some respondent interest (more than 1%) in new facilities. The low responses here should not be confused with the demand figures, which show that there is public interest in all these activities, rather that residents of this region do not feel that additional facilities (or any public facilities) are needed to support the activity. Perhaps the exception here is surfing.

These facility interests have been translated into Inferred Demand for resource types. The method used results in the highest needs – i.e. the ones which satisfy most activity desires of this region's residents - being those for rivers and streams, agricultural lands, lakes and ponds, golf courses and parks, and trails and greenways. While these are presented in order of their rank scores, the relative differences among the need for each recreational area are small.

Figure 48. Inferred Need for New Recreational Areas in the Central Region



Northeastern Region



Population and Resource Profiles

The Northeastern Region is made up of major portions of two counties, Middlesex and Essex. These two counties are predominantly urban, with over 90% of the population classified as such, and contain many of the most prosperous residential communities in the state. Major urban centers include Lawrence, Lowell, and Salem. Industries mimic those of many other regions, with manufacturing accounting for approximately 20% of employment opportunities, followed by retail and various professional services. Notable physical features include the coastal region of the north shore, as well as several river systems - the Nashua, SuAsCo (Sudbury, Assabet, and Concord), and the Merrimack and Shawsheen. A number of coastal rivers, including the Parker, Ipswich, Rowley and Essex Rivers, are important to the character, resources and land uses in the coastal section of Essex County. In addition, this region, particularly the Essex County portion, contains numerous historic sites. Many of these sites are set within handsome town centers, such as Essex, Salem, Groton, Newburyport, and of course, Concord and Lexington. In this region, these town centers and others are a significant attraction themselves.

A special word is warranted on the Merrimack River, one of the largest yet least protected riverine systems in New England. This river serves as water supply to major cities, such as Lowell and Lawrence, and is the subject of an interstate compact with New Hampshire, but has precious little protected land along its Massachusetts course. This fact relates, in part, to its early industrialization, because of its tremendous water power resource. However, as most protection of conservation and recreation lands have occurred in the last one hundred years, many opportunities have been passed by, allowing further urbanization and suburbanization to creep down to the river banks. This spectacular regional resource merits very special efforts among the many parties of interest (local, state, non-profit and federal) to save and restore it as a primary asset to its bordering communities.

This region is absent any major mountainous areas, being part of the Southern New England Coastal Plains and Hills Region. However, the long historical presence of agriculture and woodlands and the abundance of surface water resources lend this region its distinctive and attractive landscape. These same qualities, of course, have drawn both residential settlement and business and industrial uses out into this former hinterland, resulting in the substantial suburbanization of much of the region. This settlement follows and is served by the excellent limited-access state and federal highway system, leaving the resource areas furthest from Rtes. 2, I-495, 3, I-93 and I-95 most intact.

In addition to the long-standing urban centers noted above, a number of newly emerging growth centers at the former Ft. Devens Army base should be noted for planning purposes. This former DOD facility has excellent highway access to Rt. 2, I-495 and I-290.

Water withdrawal and seasonal drought conditions are increasingly becoming a concern in this region for all human uses, including recreation, as well as for wildlife and plant ecology. Historical loss of wetlands for recharge and storage during seasonally wet cycles has further exacerbated the withdrawal problem in river basins such as the Shawsheen and Ipswich Rivers.

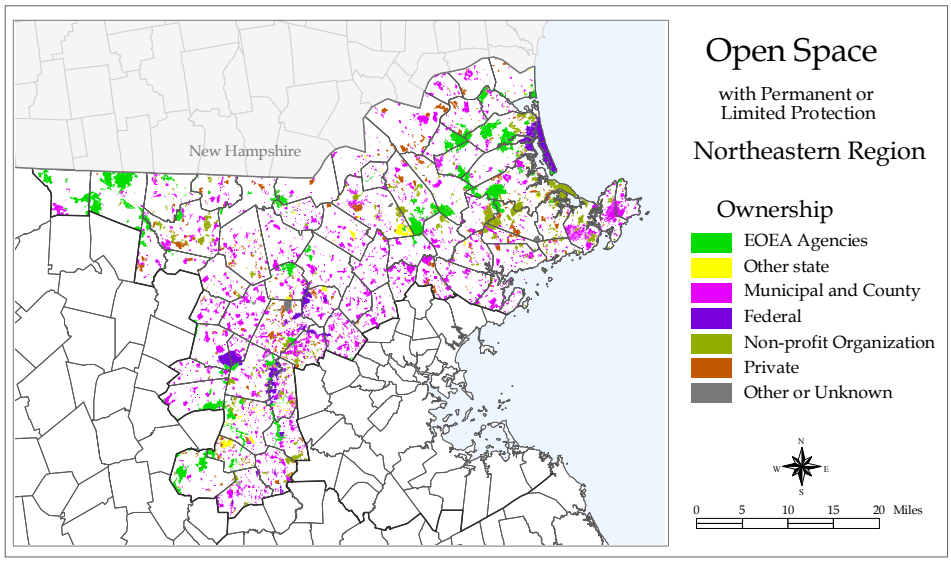


Figure 49. Protected Lands in the Northeastern Region

Regional Facilities and Protected Land Supply Patterns

The Northeastern Region ranks fifth among the regions in both open space acreage and percent of regional land area in open space, while having the second highest population. The Northeastern Region, ties the Central Region for the largest number of sites overall, and reports significantly more individual sites of all kinds than all other regions. While surprising, this conclusion is born out to some degree by the survey of where state residents have reported recreation experience (see Chapter IV Demand). The 1995 survey ranks the Northeastern Region first or second in 7 out of 12 categories of reported usage of facilities in the region. Yet, the region contains only a modest number of the state's total recreation acreage, ranking fifth out of the 7 regions in open space acreage (See Table S-3). This implies both a higher density of activity per site, and higher utilization and visitation rates than other regions. Most notable is the much larger number for passive and trail-based activities in the Northeast than other regions.

The Northeastern SCORP Region also shows a strong concentration of protected open space and recreation lands, giving Essex County where much of this protected land is situated, a wider resource base than the Middlesex, or western, portion of the region. In the easterly sector, a number of sizable recreation and conservation areas have been protected by federal, state, nonprofit and municipal efforts in Ipswich, North Andover, Boxford, Topsfield and Gloucester. The southwestern and northwestern corners of the region also have significant regional conservation and recreation holdings in Townsend, Pepperell, Shirley, and Lunenburg and municipal and non-profit holdings in the towns of Lincoln, Concord, Bedford and Carlisle.

When the open space resources of this region are viewed according to resource type, which is the purpose for which these lands are protected, and their current land use, the portfolio is weighted more heavily to conservation than any other region, rivaled only by the Cape and Islands. From an ecosystem protection perspective, this pattern supports the identification of these two regions as being the most critical ecoregions in the state, along with the southern Berkshires.

As a consequence of the bedrock geology, glaciation, and the resulting terrain of the coastal hills ecoregion, the Northeastern Region is blessed with a great many surface water bodies. Almost all of these ponds are small in size, and often result from natural or manmade impoundment along river courses, but clearly offer a recreation and scenic benefit to the region today.

Ownership and Management of Open Space Lands

The federal presence in this region is significant, in both the Parker River and Great Meadows Wildlife Refuges. These holdings, especially the coastal barrier beach and salt marsh system of the Parker River, are not only of statewide significance, but even national and global consequence owing to its rare hydrology, plant community and strategic coastal position in the Atlantic seaboard flyway. Large numbers of visitors to these sites further attest to their recognition as unique conservation assets that also provide recreation benefits.

The state role in providing recreation and conservation supply is, as elsewhere, the leading one, albeit much more strongly supplemented by other partners than in some regions. While the MDC has no jurisdiction in this region, the DEM and DFWELE have considerable holdings. These holdings are concentrated in the towns of central Essex County (N. Andover, Boxford, Rowley, Ipswich, Groveland and Newbury. A subsidiary group was also noted in the extreme northwest corner of Middlesex County, in Townsend, Pepperell, Lunenburg, Shirley, and Dunstable. In the southerly end of the region, the town of Stow has considerable state holdings, including numerous agricultural preservation restrictions (APR's). This town and the abutting Maynard, Sudbury and Hudson have also benefited since the last SCORP from the conversion of the former federal DOD facility (Natick Laboratories) to a DEM state forest. The towns of Hopkinton and Ashland are hosts and beneficiaries of significant state park and water supply holdings. To a lesser extent, Framingham and Marlborough benefit from the Sudbury Reservoir watershed lands, principally in Southborough, which is in the adjoining CentralRegion.

At the local level, a number of towns have been very active over the long term in setting aside land for open space purposes. In the southern part of the region, these towns include Ashland, Sudbury, Holliston, Lincoln, Lexington, Acton and Boxford. In the center of the region, the towns of Reading, Lynnfield and Lynn, with its wonderful Lynn Woods preserve, have achieved much, while on Cape Ann, Gloucester and Rockport have actively pursued land protection, especially for water supply. To the west, Lunenburg has been aggressive in supplementing the state and private non-profit holdings.

The private non-profit presence in this region is almost as large as in the Central, BerkshireRegions, and the Islands. The work of the statewide organizations, such as the Massachusetts Audubon Society and The Trustees of Reservations is strongly reinforced in this region through the work of the Essex County Greenbelt Association, and through many CR's (Conservation Restrictions) and APR's funded, at least in part, by the state. As with other non-municipal entities, there is once again a notable lack of facilities in the central part of the Northeastern Region, from Chelmsford down to Peabody, and from Lexington up through North Reading, perhaps correlating again to the location of major regional highways.

Demand in the Northeastern Region

Activities

In terms of the most popular activities, the NortheasternRegion is unremarkable, closely following the statewide patterns. Swimming, walking, sightseeing and tours, hiking and fishing top the list. However, interesting and distinctive preference patterns emerge at a more subtle level when activity levels are compared in detail with other regions.

Among the more notable exceptions, baseball, sunbathing, horseback riding, off-road vehicle driving, snowmobiling, boating (motorized), and surfing are more often reported here than anywhere else in the Commonwealth. Also more popular than average are soccer, tot lot activity, and hockey (pond).

While motor boating is most popular, sail boating and sailing are reported at their least popular level statewide, notwithstanding the great harbors of Marblehead, Salem, Manchester and Lynn. The same is true of football, sightseeing and tours and events, road biking, cross country skiing, fishing, and hunting. Also less frequently reported than other regions are roller blading and skating, running and jogging, and camping.

When aggregated according to field, water, trail, passive and wilderness activities or pursuits, the strongest area seems to be that of water-based activities, followed by passive recreation activities. Wilderness activities are the least reported. These patterns imply the abundance of water (both coastal and fresh) and conservation resources, and hint at the relative scarcity of trail and wilderness types of resources.

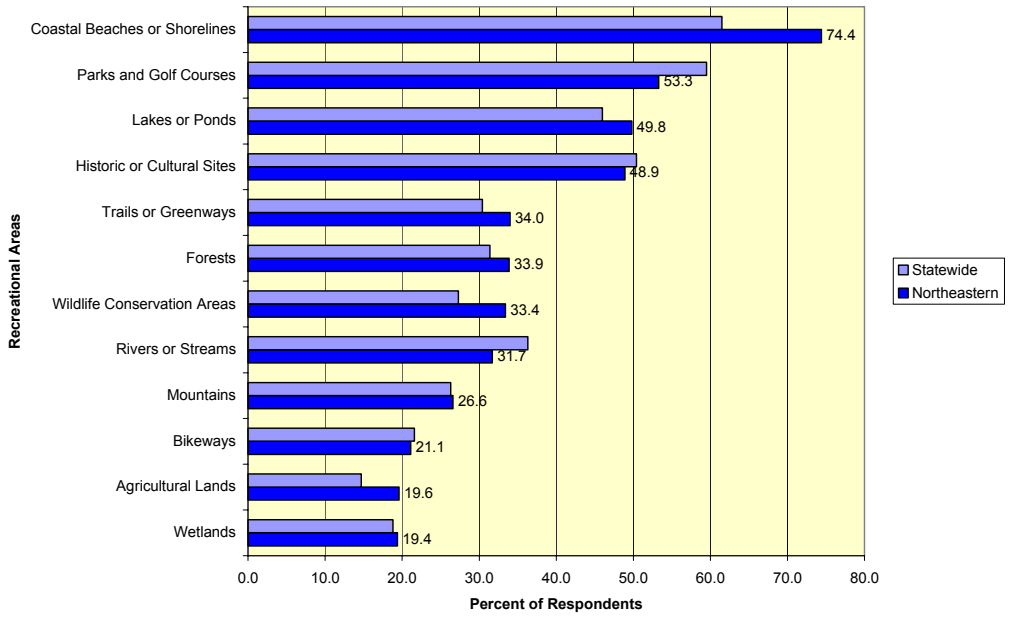
Figure 50. Participation Rates in Activities in the Northeastern Region †			
	RECREATIONAL AREA	Statewide (% of Respondents††)	Northeastern (% of Respondents††)
Field-Based Activities			
	Baseball	6.4	10.2
	Basketball	5.6	3.4
	Football	2.1	0
	Golfing	24.7	27.7
	Ice Skating (rink)	0.1	0
	Playground activity	26.1	26.1
	Soccer	2.6	4.6
	Tennis	2.2	1.2
	Toddler activity (at tot lots)	5.5	7.7
	Volleyball	2.5	2.4
Passive Recreational Activities			
	Photography / painting	5	6.3
	Picnicking	22.6	20.3
	Sightseeing, tours, events	54	47.4
	Sunbathing	19.6	24.2
	Watch wildlife, nature study	21.7	21.8
Trail-Based Activities			
	Biking (mountain)	12.5	13.7
	Biking (road)	15.8	12.5
	Horseback riding	0.8	1.8
	Off-road vehicle driving	0.7	2
	Roller blading / skating	2.7	1.6
	Running / jogging	3.9	2.5
	Skiing (cross country)	3.2	2.2
	Skiing (downhill)	7.6	7.6
	Snowmobiling	0.9	3
	Walking	56.5	56.7
Water-Based Activities			
	Boating (motorized)	8.2	12.2
	Boating (non-motorized)	7.8	4.7
	Canoeing, rafting	8.5	6.4
	Fishing	26.5	25.2
	Hockey (natural water bodies)	0.3	1
	Ice skating (pond, lake or natural water bodies)	1.8	1
	Sailing	2.5	0.8
	Surfing	0.9	1.8
	Swimming	54.6	58.9
	Water skiing / jet skiing	1.9	1.8
Wilderness Activities			
	Camping	7.7	6.1
	Hiking	30.8	30.4
	Hunting	2.7	1.2
† Based on respondents who indicate that they have visited recreational areas in the last 12 months.			
†† Percents may not equal 100 due to multiple response.			
* Difference with Statewide result is significant at the 90% confidence level.			

Resource Use

Once again, the statewide patterns are in evidence in the Northeast, with coastal beaches and shorelines topping the list of resource areas used, followed distantly by golf courses, neighborhood parks, playgrounds and tot lots, lakes and ponds, and historic and cultural sites. The least used recreation resources in the northeast are reported to be wetlands and agricultural lands, although these had high satisfaction ratings for those using them.

Regarding the frequency of visits, versus number reporting use, residents here indicate much lower frequency of return trips per year to wetlands, trails and greenways, wildlife conservation areas, and agricultural lands. Not consistent with the preferences noted above, this data would suggest that in the Northeast, a large percentage of the population is engaged in these activities, but on an infrequent basis.

Figure 51. Experience with Recreational Areas in the Northeastern Region



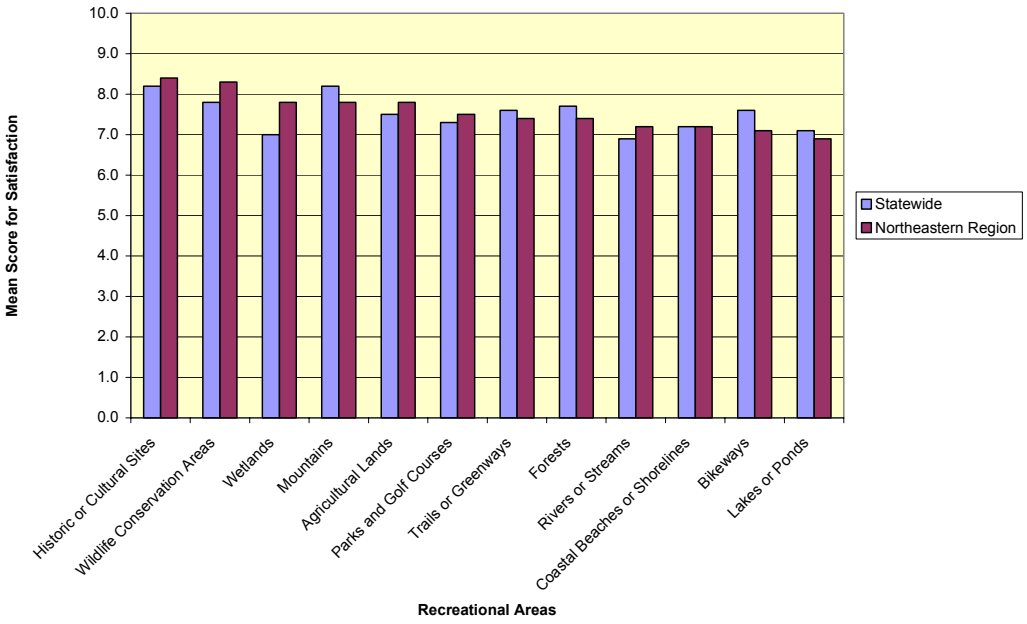
Needs in the Northeastern Region

Satisfaction Levels

Residents of this region are least satisfied with lakes and ponds, bikeways, rivers and streams, and coastal beaches, in that order. The dissatisfaction level for bikeways is far and away the highest in the state. Cleanliness, maintenance, and other are cited as issues. The same is true, though to a lesser degree, with forests, where capacity and attractiveness are cited as complaints, causing forests to be ranked lowest in this region in terms of median number of trips. The Northeastern Region reports the lowest dissatisfaction level of all regions for golf course, neighborhood parks, playgrounds and tot lots.

The highest satisfaction level is that for historic and cultural sites, followed by wildlife conservation areas, and then mountains, agricultural lands and wetlands. The high satisfaction level with mountains must result from the closer proximity of Northeast residents to northern New England ranges in New Hampshire, Vermont and Maine. This conclusion is supported by the average distance traveled by residents of this region to mountain recreation areas, 200 miles. However, this sample was too small to reach the 90% confidence level. Satisfaction levels with wetlands, agricultural lands, and historic sites reflect the much shorter distances that residents of this region travel to reach these destinations.

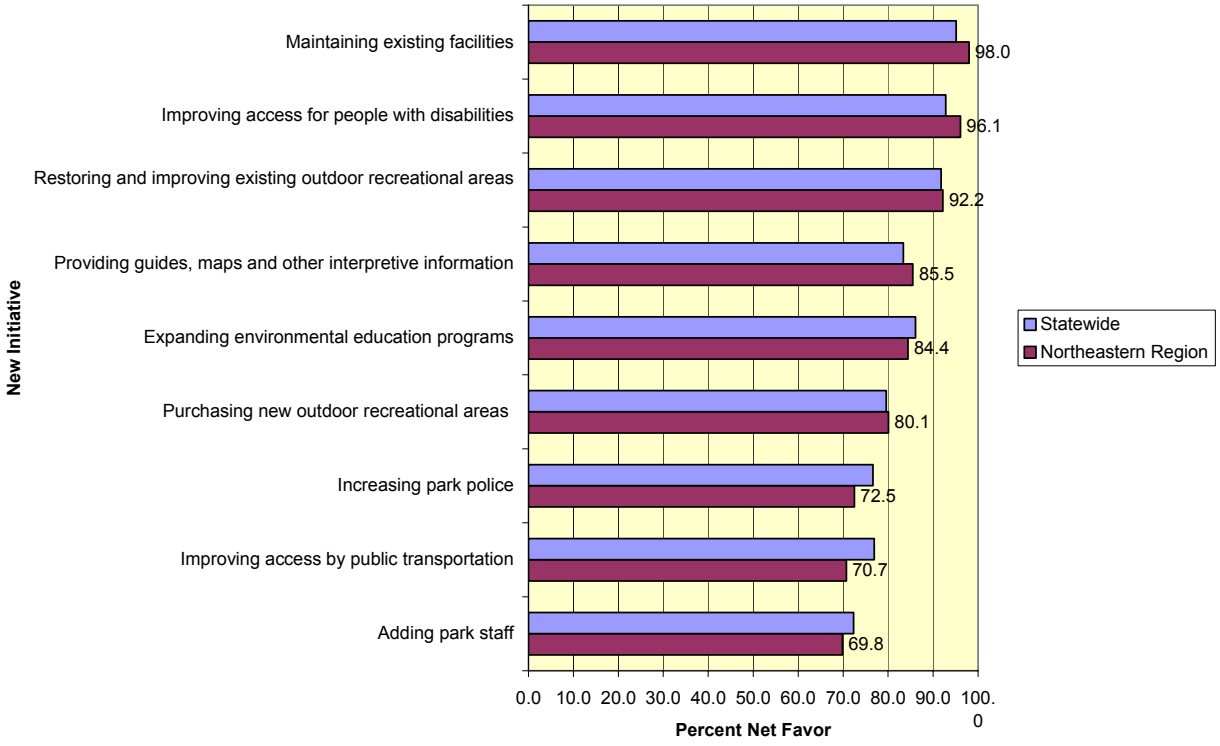
Figure 52. Satisfaction with Recreational Areas in the Northeastern Region



Funding Preferences

In the Northeast, residents support improving access for people with disabilities more strongly (96.1%) than in any other region, although support statewide is already at 92.8%. Support for maintaining existing facilities ranks at the top of this region's priority list, as is also the case statewide, with the Northeast (98.0%) tying the Connecticut Valley for the highest reported value in any funding priority. Adding park staff received the lowest priority ranking, but still exceeds a two-thirds majority at 69.9%. Support for new acquisitions was also among the highest regionally, at 80.1%, just below that in the Metropolitan Boston (80.4%) and Central (81.1) regions.

Figure 53. Funding New Initiatives in the Northeastern Region

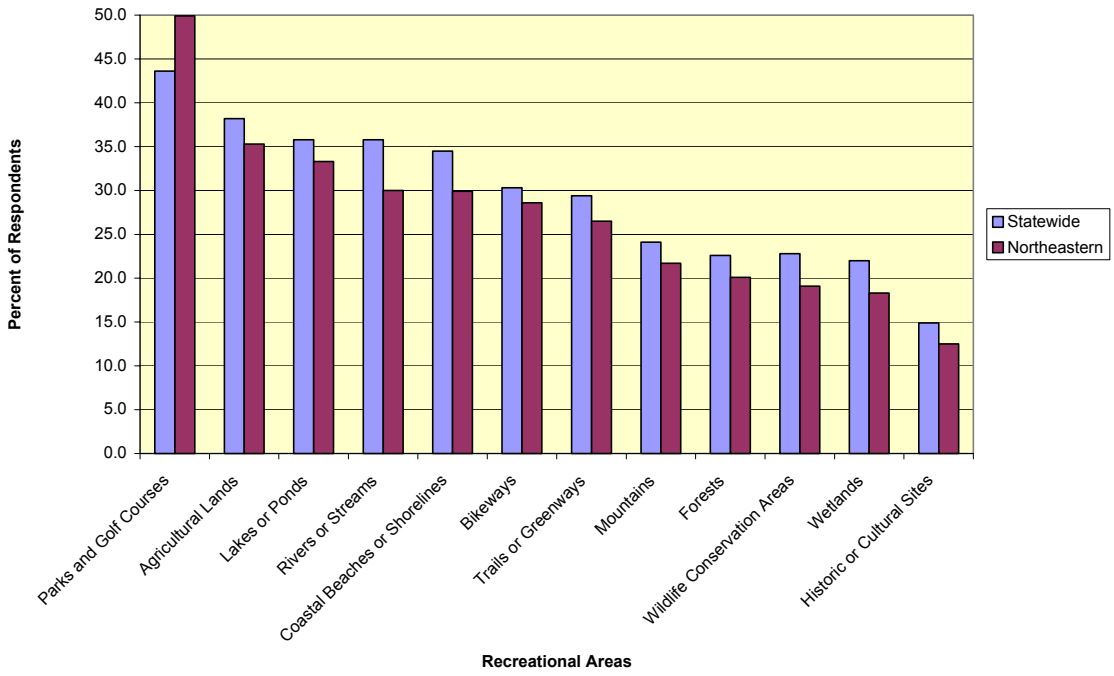


Facilities Needs

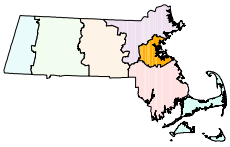
The survey asked residents what new facilities would most benefit them, and it is a good thing the question was asked, because the answers in the Northeast are largely not a direct reflection of the supply and demand patterns. The respondents in this region place the highest priority for new facilities on road biking (14.1%), then playground activity (13.8%), swimming (12.6%), walking (11.8%), golfing (9.1%) and basketball (8.3%). A middle tier of priorities includes tennis (7.6%), fishing (6.5%) and mountain biking (6.1%).

When expressed as inferred need for new recreational areas, these activities translate to the need for more playgrounds, neighborhood parks, and golf courses, and better access to agricultural lands, lakes and ponds, rivers and streams, and coastal beaches. Need was nearly as strongly expressed for bikeways and trails or greenways. The least need was identified for historic and cultural sites and then wetlands.

Figure 54. Inferred Need for New Recreational Areas in the Northeastern Region



Metropolitan Boston Region



Population and Resource Profiles

The most urbanized of the seven SCORP regions, the Metropolitan Boston Region is composed of Suffolk county and portions of Middlesex, Essex, and Norfolk counties. The dominant state park agency in this region is the Metropolitan District Commission (MDC). Metropolitan Boston is, of course, the major urban center in the state, as well as the center of government, finance, transportation and commerce. The economy is largely characterized by professional services and is supported by the many colleges and universities located in the area. The Metropolitan Boston Region is entirely within, but is only a portion of, the Metropolitan Area Planning Council regional planning agency.

This region comprises the Boston Basin, formed by the ring of highlands surrounding Boston Harbor and the urban core of the city. To the south are the prominent and historic Blue Hills, a rugged and ledge filled upland chain of ancient geologic age. To the west lie the Arlington Heights, and to the north, the MDC's Middlesex Fells Reservation incorporates another rim of the basin. While the Boston Basin extends outward of these highlands, to the north and west, based on bedrock geology and ecoregion definition, these features nonetheless help to define the region, so much so that Charles Elliot recognized them in his visionary plan. This plan, perhaps the first ecoregion plan, has become the cornerstone of the MDC park system; its simple but insightful formula is to connect the hills, through the river corridors, to the sea.

The other correspondingly significant landscape features of this system are the several major rivers: the Charles, Neponset and Mystic. The force of these rivers, over geologic time, along with glaciation and weathering processes, have acted to produce the landscape that New England's "hub" now occupies. Because of the low gradient of the rivers, and the scraping action of the glaciers, the region is rich in wetlands, both salt and fresh, yet nearly devoid of lakes and ponds.

In contrast, the coastline itself is a profoundly important physical feature of this region, including such unique areas as the islands of Boston Harbor, the great peninsulas of Hull, Hough's Neck, Squantum, Winthrop's Deer Island, and Nahant. This deeply embayed and varied coastline encloses Massachusetts Bay, and through its outstanding scenic and recreation resources, along with its economic ones, acts as a powerful magnet to human population. This region is home to 1.9 million people, almost one-third (31%) of the state's total population. With this density of population, forest and agricultural resources are obviously more limited in area than in other parts of the state.

Supply in the Metropolitan Boston Region

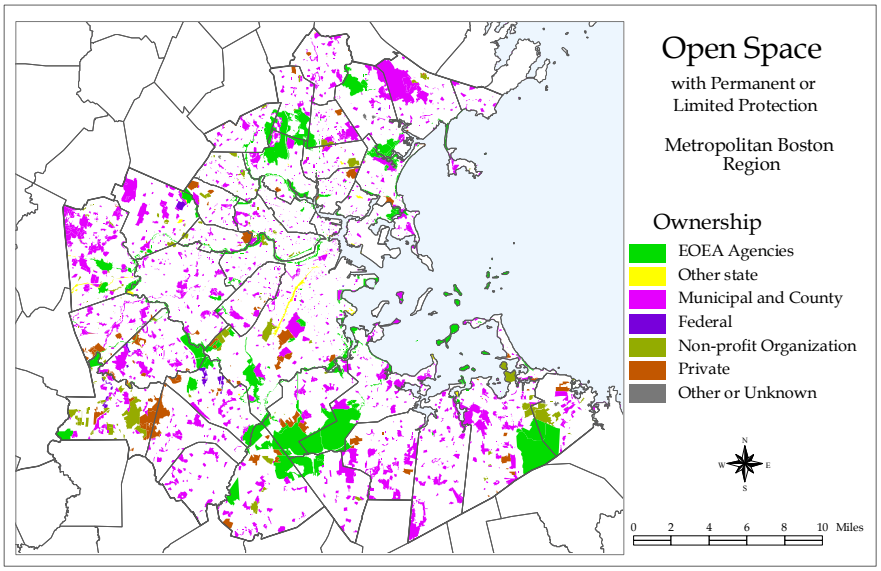


Figure 55. Protected Lands in the Metropolitan Boston Region

Regional Facilities and Protected Land Supply Patterns
The smallest of the SCORP regions in area, the Metropolitan Boston Region also has the smallest amount of open space acreage. However, as a percentage of total land area dedicated to recreation and open space, this urbanized region ranks third among the seven SCORP regions, at 26.0% of the land area of the region. This statistic becomes even more striking when you consider that the Metropolitan Boston Region contains approximately 32% of the state population but only 4.8% of the land area. While the per capita acreage of recreation and conservation land available within the Metropolitan BostonRegion is predictably low, at .03 acres per person (or 30 acres per thousand), because of the higher population densities here, the total recreation acreage is quite significant.

Ownership and Management of Open Space Lands
The above description of new and emerging resources says much about the importance of the state and federal governments in provision of regional facilities. However, at a more localized level, several municipalities and non-profits are also playing key roles. The City of Boston, of course, with its historic gems of Franklin Park, Arnold Arboretum and the Jamaica Way, is certainly noteworthy. The 1996 MDC acquisition of the Hancock Woods in the West Roxbury neighborhood, along with the City's conversion of the Gardner Street landfill with the help of state Urban Self-Help grant funds, add to the City's impressive 6,352 acres. The emerging parks on the north bank of the Charles under the new Charles River bridge, and the surface parks over the soon to be depressed Central Artery, will be stunning inheritances funded by federal and state transportation dollars, perhaps the most significant addition to the Olmsted legacy this century.

The towns of Weymouth and Braintree continue to benefit from the foresighted creation of an inter-town Pond Meadow Park, created with U.S. Army Corps flood control dollars and providing significant recreation and wildlife benefits as well. Braintree also shares extensive protected watershed lands with Randolph around the Great Pond, Upper Reservoir, Richardi and Cochato Reservoirs. However, these holdings have the same recreation limitations as mentioned with Quabbin and Worcester surface water supply holdings. Hingham and Weymouth share significant holdings around the Back River, along with The Trustees of Reservation's spectacular Worlds End property, and the municipal Great Pond reservoir in Weymouth. Weymouth has also set aside a fair number of smaller local parks throughout this large and still growing town. Cohasset has made an important linkage and extension of the DEM Wompatuck Reservation, through its acquisition of the Whitney Woods Reservation.

On the North Shore, the City of Lynn's Lynn Woods Reservation is perhaps the largest municipal facility in the region, while the towns of Lexington, Weston, and Dover have opted for protection of a larger number of smaller, neighborhood level parcels. A great many of the towns of this region also benefit from the large number of golf courses, which appear to make up a very significant percentage of current local open space, albeit not always permanently protected.

The private land trusts are playing important roles in a number of these towns as well, including Mass Audubon's work in Belmont, Canton and Natick, The Trustees of Reservation's properties in Hingham and Cohasset, and local land trusts in Dover and Cohasset.

Demand in the Metropolitan Boston Region

Activities
Walking is the most reported recreation activity in this region, as in the state, followed closely by sightseeing, which is engaged more frequently here than in any region but the Southeastern and Central Regions. These are followed, in rank order, by swimming (48.3%, its lowest in the state), and then a large drop to golfing (21.5%), picnicking (21.0%), playground activity (20.5%), and sunbathing (20.3%). Significant numbers also report engaging in fishing (17.3%), and both types of biking, road (17.2%) and mountain (13.2%). It is also interesting to note that participation rates for tot lots within this region are second lowest over all regions, even though tot lot facilities are most abundant in this region. While relatively low in absolute terms, this region also reports the highest activity rates among the regions in basketball (7.9%), and the second highest for baseball (7.4%) after the Connecticut Valley. Boating, fishing, and swimming are significantly less popular among residents from Metropolitan Boston than in other regions of the state.

Taken by facility groups, the region shows a balanced interest in all recreation forms, with wilderness activities being the weakest area of participation. While one is tempted to attribute this pattern to lack of access to wilderness facilities, this belies the greater urge urban residents presumably have for release from

congestion, while the next weakest recreation type is field-based activities, in abundant supply here.

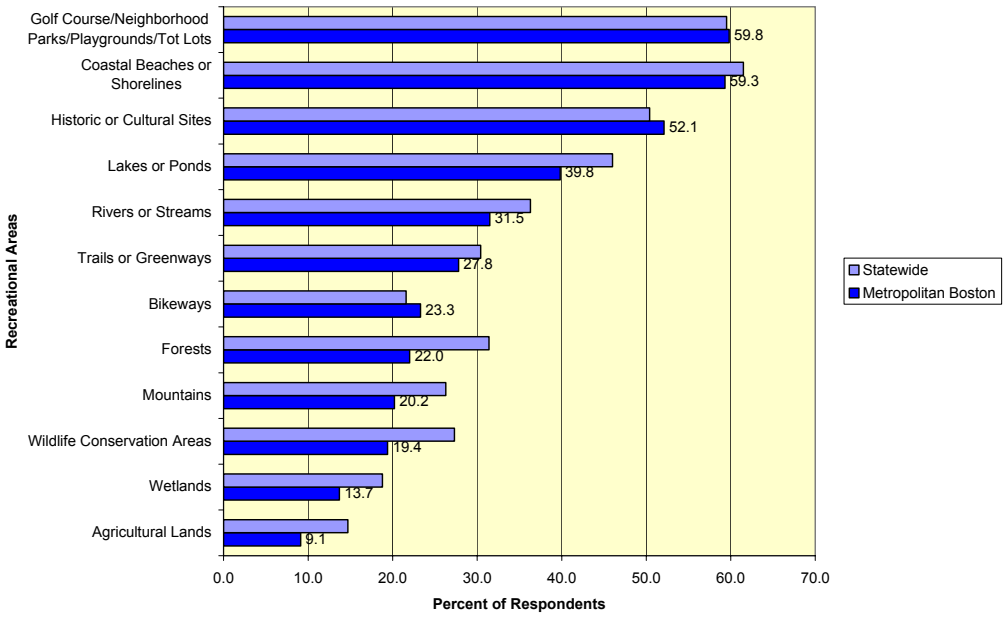
Figure 56. Participation Rates in Activities in the Metropolitan Boston Region †			
	RECREATIONAL AREA	Statewide (% of Respondents††)	Metropolitan Boston (% of Respondents††)
Field-Based Activities			
	Baseball	6.4	7.4
	Basketball	5.6	7.9
	Football	2.1	3.8
	Golfing	24.7	21.5
	Ice Skating (rink)	0.1	0
	Playground activity	26.1	20.5*
	Soccer	2.6	3
	Tennis	2.2	2.8
	Toddler activity (at tot lots)	5.5	4
	Volleyball	2.5	3.7
Passive Recreational Activities			
	Photography / painting	5	5.6
	Picnicking	22.6	21
	Sightseeing, tours, events	54	55.2
	Sunbathing	19.6	20.3
	Watch wildlife, nature study	21.7	15.3*
Trail-Based Activities			
	Biking (mountain)	12.5	13.2
	Biking (road)	15.8	17.2
	Horseback riding	0.8	0.2
	Off-road vehicle driving	0.7	0.2
	Roller blading / skating	2.7	2.9
	Running / jogging	3.9	5.4
	Skiing (cross country)	3.2	2.9
	Skiing (downhill)	7.6	6.5
	Snowmobiling	0.9	0.5
	Walking	56.5	57.9
Water-Based Activities			
	Boating (motorized)	8.2	4.6*
	Boating (non-motorized)	7.8	5.1*
	Canoeing, rafting	8.5	7
	Fishing	26.5	17.3*
	Hockey (natural water bodies)	0.3	0.2
	Ice skating (pond, lake or natural water bodies)	1.8	1.5
	Sailing	2.5	2
	Surfing	0.9	0.9
	Swimming	54.6	48.3*
	Water skiing / jet skiing	1.9	2.1
Wilderness Activities			
	Camping	7.7	6.3
	Hiking	30.8	24.0*
	Hunting	2.7	1.5
† Based on respondents who indicate that they have visited recreational areas in the last 12 months.			
†† Percents may not equal 100 due to multiple response.			
* Difference with Statewide result is significant at the 90% confidence level.			

Resource Use

Recreation trends, by activity, for the Metropolitan Boston Region are quite similar to the statewide sample, in part because this region makes up such a large part of the statewide sample. However, some interesting distinctions include the fact that this region, along with the Central and Connecticut Valley Regions, places the highest participation rates within the general activity category of field-based recreation. This includes neighborhood parks, golf courses, tot lots and playgrounds. This pattern would suggest that the presence of the state's three largest cities, Boston, Worcester and Springfield, might account for the heavy reliance on these intensive recreation facilities. Bikeways also receive heavy use, as they do on the Cape and in the Connecticut Valley. These reports are reinforced by the frequency of return visits reported, where bikeways, coastal beaches or shorelines, and golf courses, neighborhood parks, playgrounds and tot lots receive the largest number of return trips per year (10, 12 and 15 respectively). This pattern of use is quite different, even from the relatively urban Northeastern Region, which relies more heavily on rivers, streams, lakes and ponds.

Resource use is significantly less in the Metropolitan Boston Region than elsewhere across the state for half of the resource types, including lakes and ponds, wetlands, wildlife conservation areas, forests, mountains and agricultural lands. Much of this observation can be attributed to the small land area and high level of development of the region, which restricts the amount of open space, scope of the local resources, and access to recreation areas and facilities. Unlike the rest of the state, agricultural lands are not a widely used resource, given the local scarcity of this resource type, although forests receive a respectable level of utilization even in this urbanized region. Similarly, a fairly heavy use of lakes and ponds is reported, although the lowest in the state, reflecting the fact noted that these resources are not in abundant supply in this region. The same patterns hold true for wetlands, forests, and rivers or streams.

Figure 57. Experience with Recreational Areas in the Metropolitan Boston Region



One notable finding is that residents of this region travel the longest reported distance, on average, of all the regions, 22.4 miles, to reach wetlands, although this resource is abundant within the region. Residents of the region also travel further than those of any other region, and further than for any other resource type within the region, to reach forests (38.3 miles). This is further, even, than the distance traveled to coastal beaches. Yet, residents report median levels of satisfaction with this resource. The much lesser frequency of these trips to forests (3, versus 12 to coastal beaches) helps to explain this disparity.

Needs in the Metropolitan Boston Region

Satisfaction Levels

Unlike the general activity patterns, satisfaction among area residents is in stark contrast to the rest of the state. There is a very notable dissatisfaction with coastal beaches, despite the high level of use. Somewhat

surprising, wetlands, which are both abundant and attractive in this region, received the highest dissatisfaction rating (18.3%) both in the state and within the region among other resources. This rating is, in fact, the highest dissatisfaction rating for any resource type in all regions.

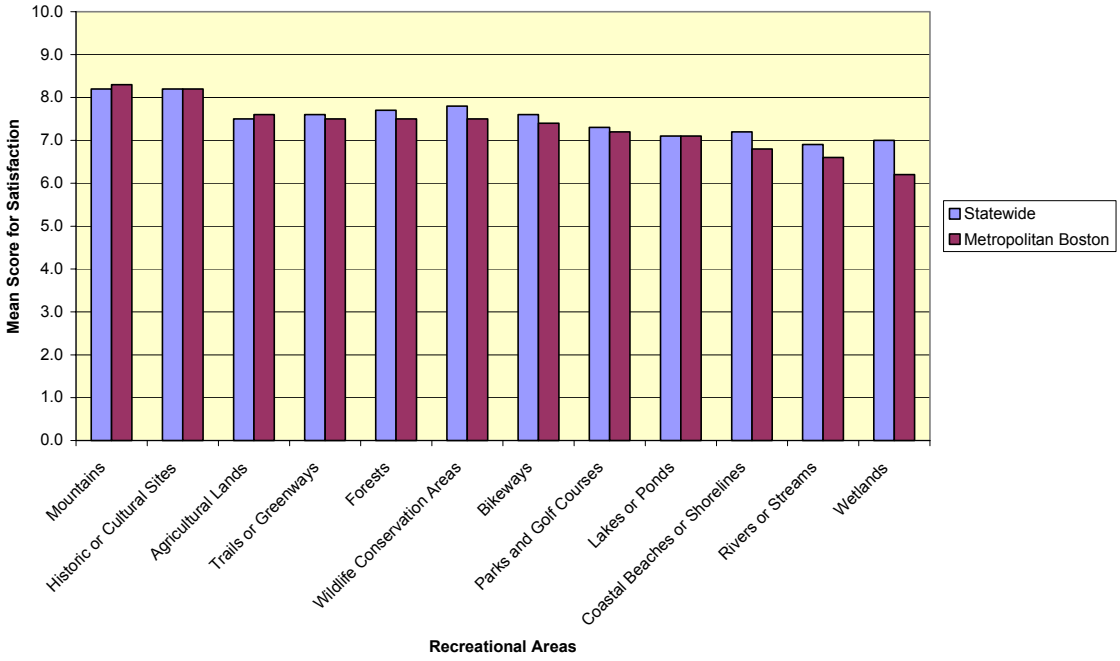
Following wetlands and coastal beaches or shorelines, Metropolitan Boston Region residents next report a three way tie for dissatisfaction levels with rivers or streams, bikeways, and golf courses, neighborhood parks, playgrounds and tot lots. These resource types seem to be abundant, relative to other regions, but may suffer nonetheless due to heavy usage, resulting in maintenance quality issues.

Although lower in percentage than the above types, mountains (6.5%) receive their highest dissatisfaction ranking statewide within the Metropolitan Boston Region. Mere distance from the resource does not suffice as an explanation, since the Cape and Islands and the Southeastern report lower levels than this. Perhaps lack of public transportation or expectations of facilities may be factors. The same basic pattern holds true for trails or greenways (8.8%), and wildlife conservation areas (9.5%).

Interestingly enough, the low use of lakes and ponds and relative scarcity of them in this region do not result in an especially notable dissatisfaction rating for this resource type. The same holds true for agricultural resources.

Overall satisfaction levels are much lower than in the other SCORP regions. The only resource receiving high satisfaction levels are historic resources, which this region's residents, along with those of the Northeast, travel the least distance (15.1 miles) to visit.

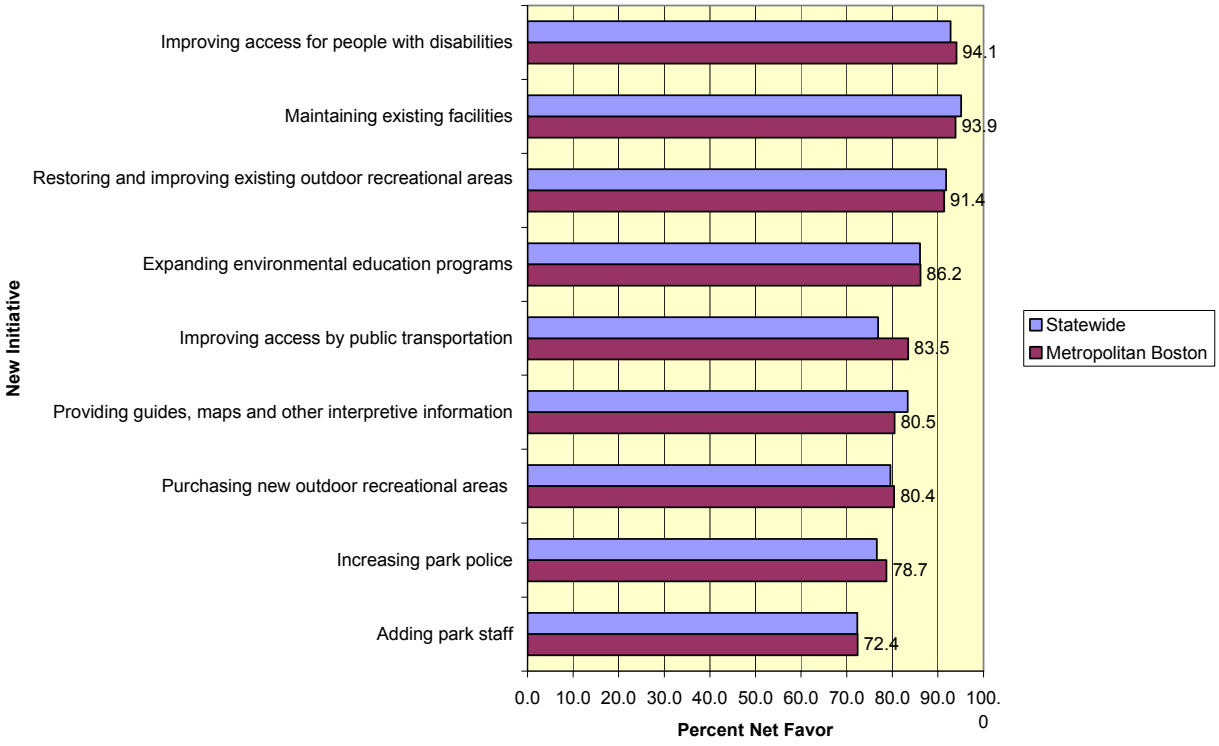
Figure 58. Satisfaction with Recreational Areas in the Metropolitan Boston Region



Funding Preferences

The most pressing need among Metropolitan Boston residents is improved access for people with disabilities. This might be a surprising finding until one considers that those who consider themselves "disabled" includes a very broad range of groups, from the people with mental disabilities to the elderly. Among other needs, area residents mirror other regions of the state by strongly favoring maintenance and restoration of existing facilities. Public transportation access to recreation areas is a much higher priority among Metropolitan Boston residents than among residents of other regions (83.5%). Finally, the purchase of new facilities is highly favored, with 80% favoring this priority. Providing interpretive maps and information receives its lowest priority ranking among the regions here but still rates an 80.5% favorability rating. Contrary to general perceptions, the need to increase park police ranks next to lowest in regional priorities (78.7%), higher only than adding park staff (72.4%). The security issue may be masked, however, by possible differences between inner and outer suburbs.

Figure 59. Funding New Initiatives in the Metropolitan Boston Region

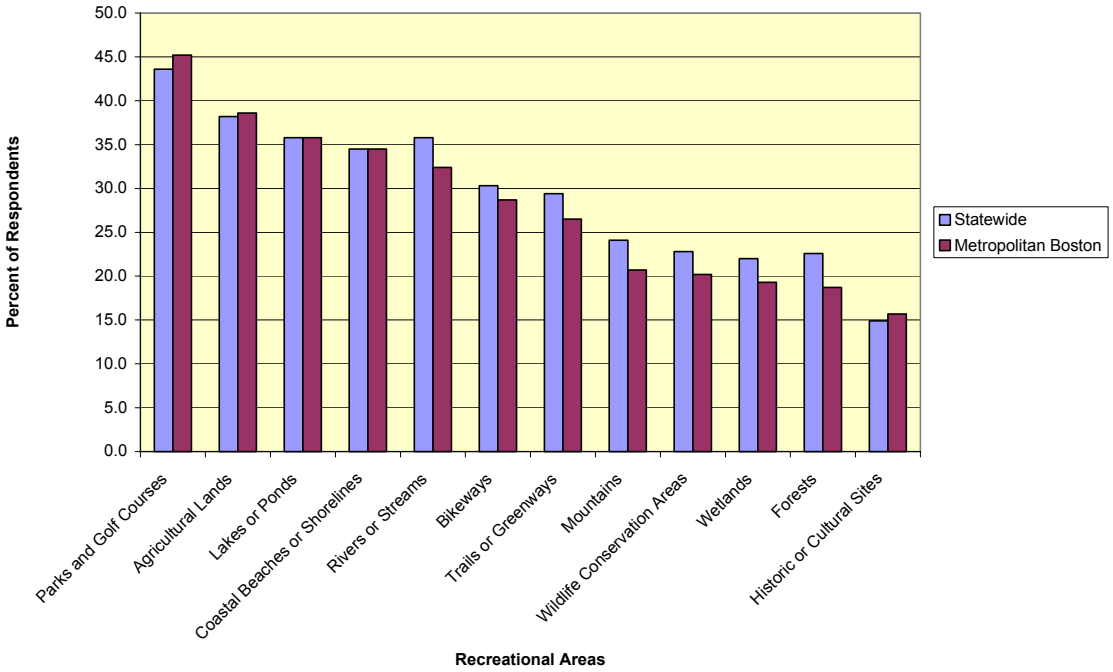


Facilities Needs

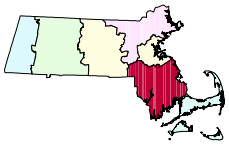
Residents from Metropolitan Boston mention needs for tennis (11.8%) and basketball (8.7%) significantly more than the statewide sample. They mention needs for fishing and hiking significantly less often than the statewide sample, although recall the high regional dissatisfaction reported with mountains. Walking (14.8%), road biking (10.5%), and swimming (14.9%) rank highest in the preferences of this region's residents for new facilities, with playgrounds trailing closely at 9.0%.

These activities are translated into an inferred need for golf courses, neighborhood parks, playgrounds and tot lots, agricultural lands (walking), lakes and ponds, coastal beaches, rivers and streams, bikeways and trails and greenways.

Figure 60. Inferred Need for New Recreational Areas in the Metropolitan Boston Region



Southeastern Region



Population and Resource Profiles

All of Bristol and Plymouth counties and a major portion of Norfolk County make up this region. Relatively dense and rapidly growing residential communities dot the recently rural landscape of the southeast. The urban centers of Brockton, Fall River, and New Bedford service this area, and Boston serves as a major employment center for the many residents willing to make the daily commute. Taunton, Attleboro and Milford are also smaller but relatively dense urban centers within their subregions. Traditional industries, such as commercial fishing and agriculture (cranberry growing in particular) are still important sectors of the economy of the southeast, as well as manufacturing in the urban centers, and various professional and service industries scattered throughout the region.

This region's population and settlement are equally defined, however, by the large number of small villages and rural hamlets that, until the last two decades, dominated the landscape of the Southeastern. Villages such as Rochester, Freetown, the Carvers, Plympton, Halifax and even Norfolk were far enough removed from major transportation routes to retain their small town character. However, with the completion of I-495 to the Cape in the late 1970's, and more recent completion of commuter rail restoration and MBTA Red Line expansions, even these once remote towns are now experiencing growth and its attendant issues of facilities demands and loss of character. Absent powerful interventions, the future of these towns is foreshadowed by the experience of the highway suburbs of the 1960's and 1970's, such as Mansfield, Plymouth, Marshfield, and Hanover, and of the 1980's growth towns, such as Foxboro, Norton, Easton, Kingston, and Plymouth (again).

Another tier of still small but more densely built up villages also characterizes the region. These places would include such town centers as Marion, Duxbury, Cohasset, Fairhaven, and Bridgewater where earlier, colonial town settlement patterns are still evident. These towns, which have had the luxury of slow, steady growth, have been able to retain much of both their historic resources and their natural and recreation ones.

This region is a part of three ecoregions. The Bristol Lowland accounts for the largest area, including all of Bristol County. Here, fertile soils have produced an agricultural landscape. Significant portions of the Plymouth County or eastern half of the region, however, belong to Coastal Plains and Hills and the Cape and Islands ecoregions. The sandy coastal plain and its myriad beaches, marshes, rivers, and ponds, and glacial hills are the dominant natural features here. This SCORP region includes two major ocean bay systems, Cape Cod Bay and Buzzards Bay. In addition, many historic sites are scattered along both coastal and inland stretches, highlighted by the colonial settlement of Plymouth. This coast, especially the Buzzards Bay portion, offers many excellent harbors of recreational significance.

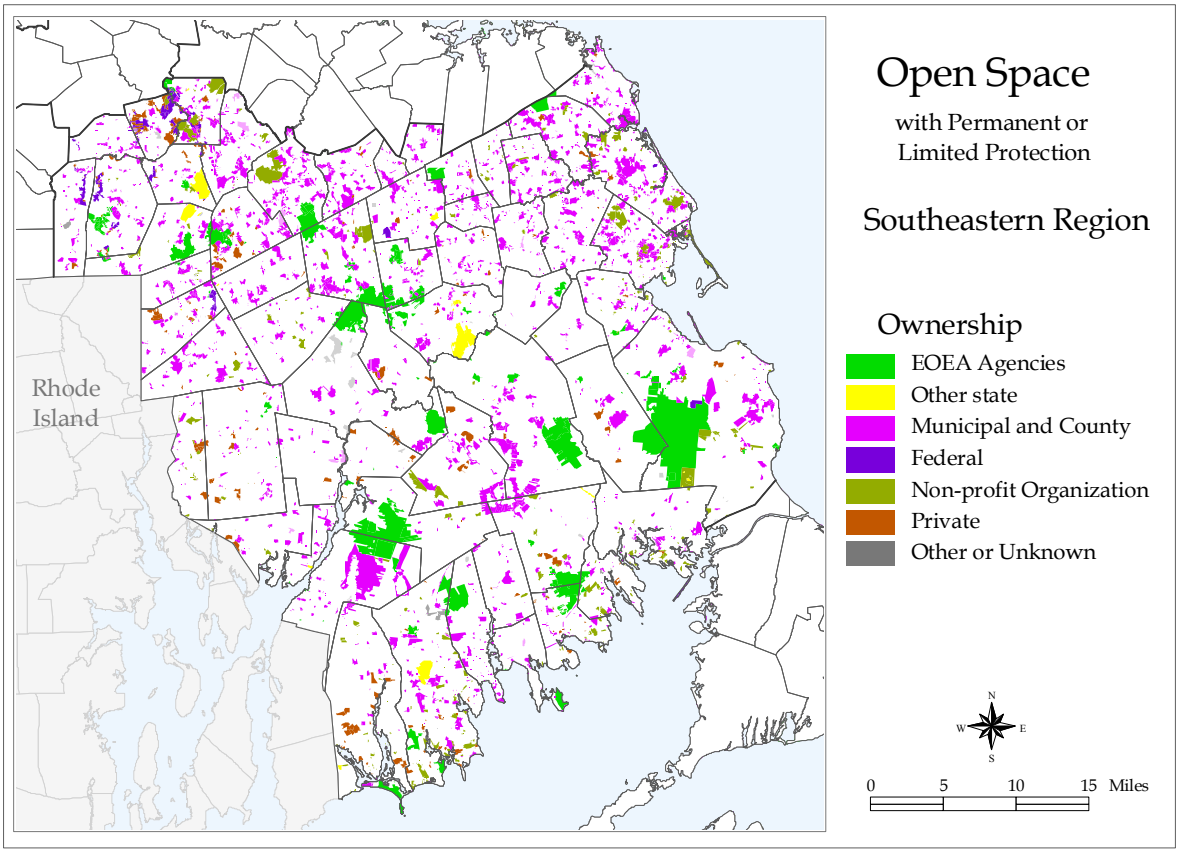


Figure 61. Supply of Protected Lands in the Southeastern Region

Regional Facilities and Protected Land Supply Patterns

As recently recognized, the Southeastern Region trails the state in percentage of land area protected or in recreation use, at 14.0%, yet has the third largest population at 1.1 million and growing rapidly. For this reason, EOEA embarked in July of 1997 on the Scenic and Natural Diversity (SAND) Program to dedicate a minimum of $30 million in open space funds to this region from July 1997 through June 2001. Over 7,000 acres were permanently protected from adverse development through this program. Among the many exciting additions in the Southeastern Region are:

- conservation and hunting areas in Mattapoisett and Rochester at the Haskell Swamp;
- the protection of the 800 acre Camp Catchalot adjacent to the Myles Standish State Forest; and
- the new 206 acre Nasketucket Bay State Park in Mattapoisett, providing over 3000 linear feet of new coastal access.

Ownership and Management of Open Space Lands

The federal presence is at its weakest in Southeastern Massachusetts, with no single holding of regional significance. About two-thirds, or a little over 2,000 acres, of the federally controlled land in this region is to be found in the upper reaches of the Charles River, under the control of the Army Corps of Engineers for floodplain and wetland protection. The towns of Millis, Franklin, Bellingham, Medfield and North Attleboro all benefit directly, as do the downstream towns. The recreation opportunities presented by these water management and habitat lands can be best understood at a subregional scale, but will likely include appropriate locations for walking and bike path or trails, canoe launch areas, picnic, photography and painting, sightseeing, and wildlife watching and nature study.

State ownership patterns are very clear in this region, amounting to nearly 50,000 acres of protected lands. One very prominent band of protected land stretches from the DEM Myles Standish State Forest in a

southwesterly arc, through the DFWELE's Rocky Gutter Wildlife Management Area, to Acushnet and Freetown State Forests, then joining the City of Fall River's Copicut and Wamsutta Reservoir complex. Fingers of other state lands dangle from this broad band through the DFWELE's Haskell Swamp, to the new Nasketucket State Park, and through the extensive Agricultural Preservation Restriction Program holdings in Dartmouth and Westport, to the DEM Demarest Lloyd and Horseneck Beach State Parks. In this latter area, DEM is also engaged with Mass. Audubon's leadership in protecting the extraordinary Allen's Pond Preserve. This mix of state protected lands offers the full panoply of public recreation opportunities, including coastal beaches and shorelines, with the obvious exception of mountainous resources.

Demand in the Southeastern Region

Activities

By a wide margin, the three most popular individual activities in the Southeastern Region are close in percentages: swimming at 60.1%, sightseeing, tours and events at 57.3% and walking at 57.1%. In fact, the sightseeing, tours, and events category received its highest level of interest statewide in this region. Well below that level of participation, substantial numbers also enjoy playground activities (37.9%), fishing (34.2%), and hiking (32.6%). Nearly one quarter of the population of this region has experience during the year with golfing (24%), and watching wildlife and nature study (23.7%). Lesser, but still significant, numbers (10-20%) also experience picnicking, sunbathing, biking (both types), skiing (downhill), non-motorized boating (motor boating is just under 10%), and canoeing.

When grouped by type of activity, the water-based activities predominate, but as in other regions, there is strong participation in some dimension of each type. A rough rank order would be water-based, passive, trail-based, field-based, and wilderness activities.

Figure 62. Participation Rates in Activities in the Southeastern Region †			
	RECREATIONAL AREA	Statewide (% of Respondents††)	Southeastern(% of Respondents††)
Field-Based Activities			
	Baseball	6.4	1.9*
	Basketball	5.6	2.5*
	Football	2.1	1.3
	Golfing	24.7	24
	Ice Skating (rink)	0.1	0
	Playground activity	26.1	37.9*
	Soccer	2.6	0
	Tennis	2.2	0.7*
	Toddler activity (at tot lots)	5.5	5.2
	Volleyball	2.5	1.7
Passive Recreational Activities			
	Photography / painting	5	1.5
	Picnicking	22.6	17.5
	Sightseeing, tours, events	54	57.3
	Sunbathing	19.6	17.3
	Watch wildlife, nature study	21.7	23.7
Trail-Based Activities			
	Biking (mountain)	12.5	9.6
	Biking (road)	15.8	18.3
	Horseback riding	0.8	1.1
	Off-road vehicle driving	0.7	0.9
	Roller blading / skating	2.7	4.2
	Running / jogging	3.9	4.3
	Skiing (cross country)	3.2	2.5
	Skiing (downhill)	7.6	10.9
	Snowmobiling	0.9	0
	Walking	56.5	57.1
Water-Based Activities			
	Boating (motorized)	8.2	9
	Boating (non-motorized)	7.8	14.1*
	Canoeing, rafting	8.5	13.6
	Fishing	26.5	34.2*
	Hockey (natural water bodies)	0.3	0
	Ice skating (pond, lake or natural water bodies)	1.8	3.3
	Sailing	2.5	5.1
	Surfing	0.9	0.9
	Swimming	54.6	60.1
	Water skiing / jet skiing	1.9	0.7
Wilderness Activities			
	Camping	7.7	9.1
	Hiking	30.8	32.6
	Hunting	2.7	3.5
† Based on respondents who indicate that they have visited recreational areas in the last 12 months.			
†† Percents may not equal 100 due to multiple response.			
* Difference with Statewide result is significant at the 90% confidence level.			

Resource Use

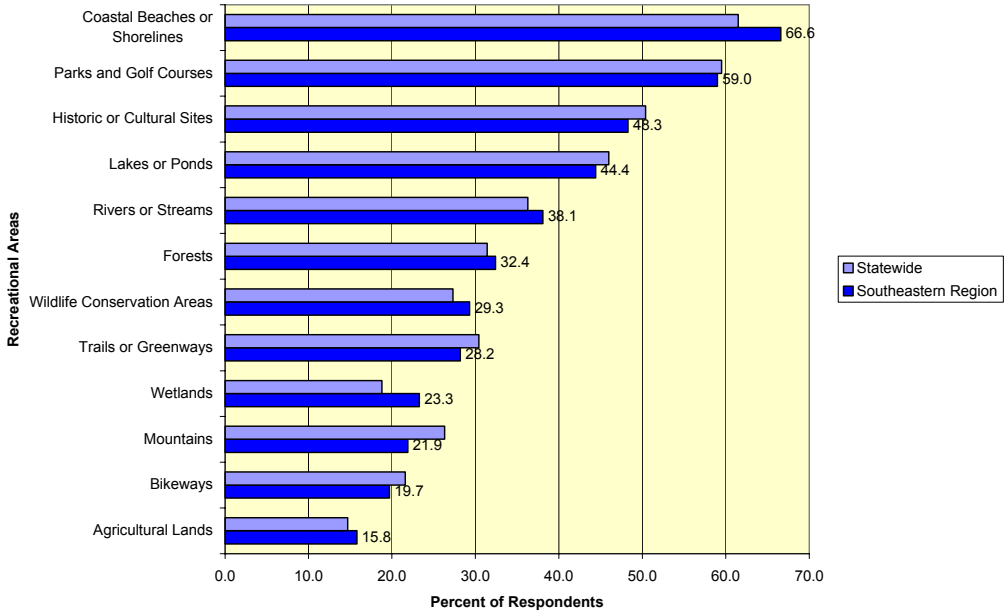
Coastal beaches and shorelines top the list (66.6%) of most widely visited sites by residents of this region. This is most impressive, when viewed from the perspective that two out of every three residents here visit coastal sites each year. Yet, while this percentage is third highest among the regions statewide, it is surprising to find the percentage significantly lower than that of the Northeast, which has far less coast line. Perhaps this fact reflects, in part, the greater abundance of fresh water resources in the Southeast in addition to its extensive salt water shoreline, or the fact that the percentage of the coast open to the public is greater along the North Shore than in the southeast, or both. The only large regional facilities here are Duxbury Beach, Plymouth Beach, Lloyd Demarest, and Horseneck Beaches. Several smaller municipal beaches that both address and limit this demand are found at the Cohasset Town Beach, Hummarock (Scituate), Rexhame (Marshfield), White Horse Beach, and West Island and Fort Phoenix Beaches (state DEM in Fairhaven).

Golf courses, neighborhood parks, playgrounds and tot lots are widely used by residents in this region, second only to the coastal resources. The role of terrain was noted earlier. A somewhat milder climate, due to ocean influences on two sides of the region, may also play a role in golf, as do the five cities of the region where neighborhood park recreation is vital (in Brockton, Taunton, Fall River, New Bedford and Attleboro).

The next group of resources that reach more than one in four residents would include historic and cultural sites, lakes and ponds, rivers and streams, and forests. More than one in four residents (25% +) visited wildlife conservation areas, trails and greenways. The least widely visited resources in the Southeast were wetlands, mountains, bikeways, and agricultural lands. Yet, while agricultural lands ranked low relative to other activities and resources within the region, they represent the highest frequency of agricultural visits among all regions.

While the low mountain visitation figure is clearly affected by distance, it is quite the contrary with the three other resource types in this group. As is shown subsequently by the Need responses, biking is clearly a desired activity, so the low current participation may reflect the general lack of such facilities in reasonable proximity to home. This explanation is born out by the fact that residents report the third longest travel distance - 36.4 miles each way – to reach bikeways. Agricultural lands and wetlands are among the least visited resource types statewide, so this is not especially surprising in the Southeast, even with the extensive farm and wetlands areas. It may also be, in this case, that residents enjoying a walk or ride along these resources simply think more in terms of the associated river, pond or ocean water bodies, or of the specific recreation facilities, than the marshes themselves.

Figure 63. Experience with Recreational Areas in the Southeastern Region

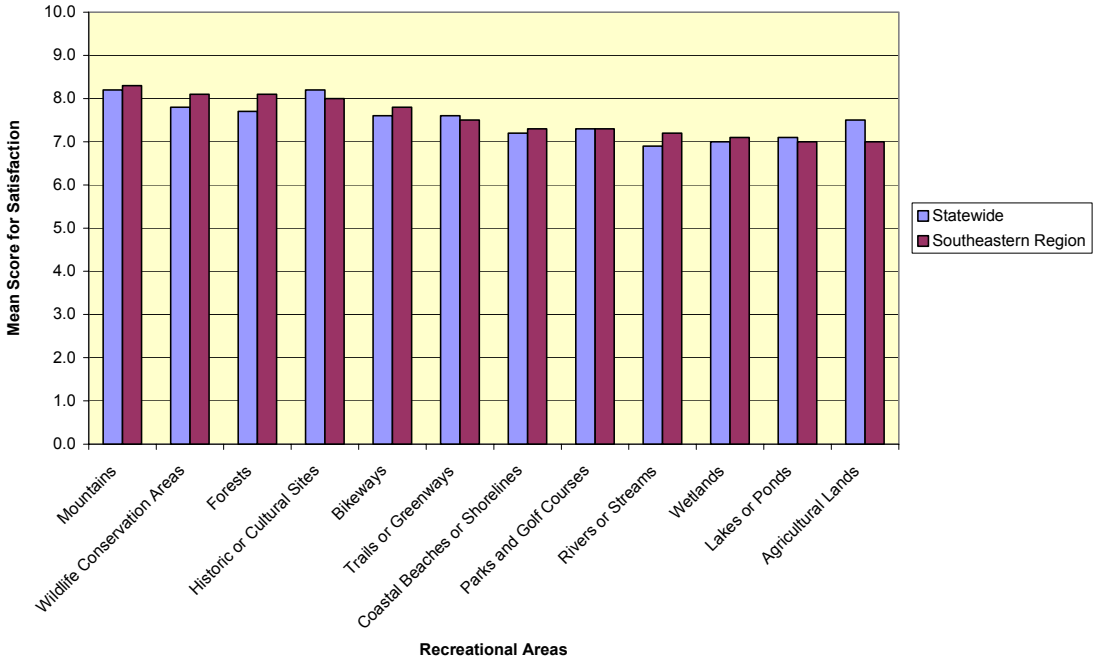


Needs in the Southeastern Region

Satisfaction Levels

In most resource categories, residents of this region had lower levels of dissatisfaction than residents in other regions. This observation is particularly the case for forests and wetlands, where, among the small percentage of population visiting these types of sites, no dissatisfaction at all (0%) was reported. However, the average trip distance to forests for residents of this region was second highest in the state, at 20 miles each way. The highest levels of dissatisfaction in the Southeast, slightly higher than statewide averages, were noted for bikeways and coastal beaches. While rivers and streams were not noted in the dissatisfaction index, residents in this region travel least often (except for the Northeast) to these resources, and travel the furthest average distance. The same is roughly the case for lakes and ponds.

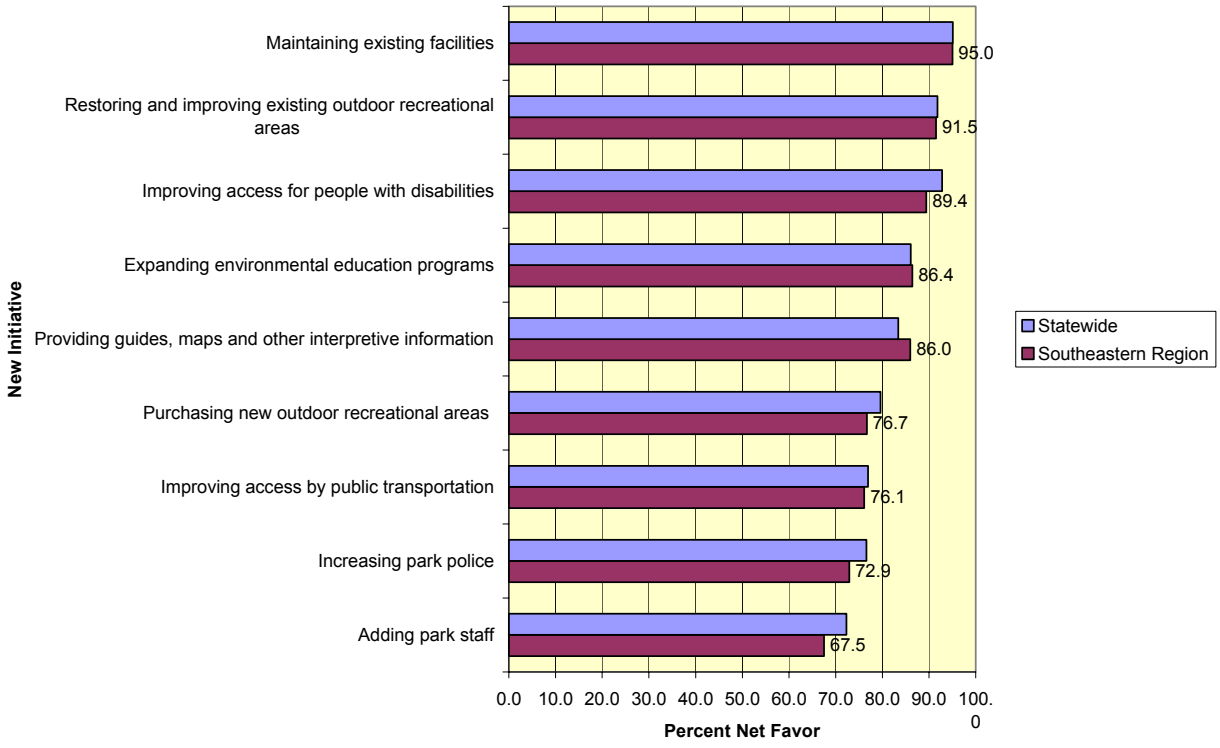
Figure 64. Satisfaction with Recreational Areas in the Southeastern Region



Funding Preferences

Residents of this region strongly favor maintaining existing facilities, and also favor restoring existing facilities by a strong margin, as both these responses earned over 90%. This region's responses closely track that of the statewide sample.

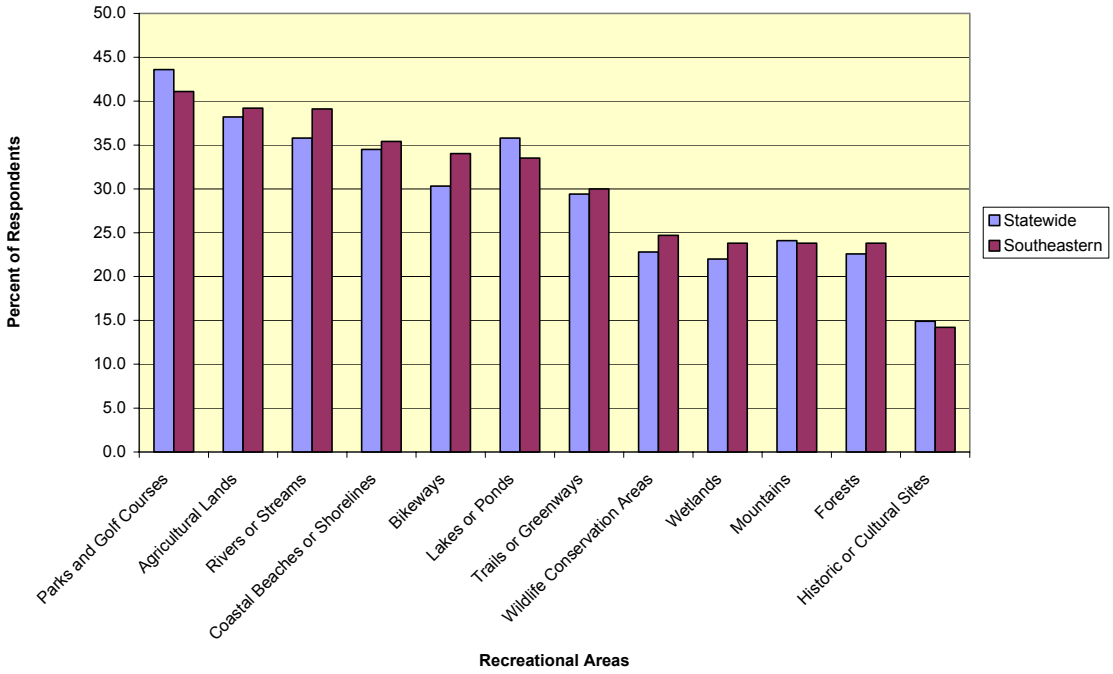
Figure 65. Funding New Initiatves in the Southeastern Region



Facilities Needs

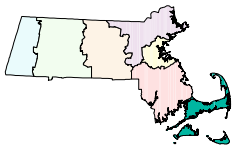
The above supply, demand, funding and satisfaction levels combine to result in the perceived Needs of the region's residents. The resources most sorely needed, say residents, are golf courses, neighborhood parks, playgrounds and tot lots (41.1%), agricultural lands (39.2%), and rivers and streams (39.1%). This is an interesting report in that all of these activities represent ones of middle to low levels of current participation, while the resources themselves are relatively abundant. Access to the resources may be a part of the concern, along with maintenance (for parks).

Figure 66. Inferred Need for New Recreational Areas in the Southeastern Region



Not far below this cluster of responses are also coastal beaches or shorelines (35.4%), bikeways (34%), lakes and ponds (33.5%), and trails and greenways (30%). Notable here is that these resources represent areas of the highest usage and highest satisfaction, yet only elicit moderate levels of need. This would imply reasonably abundant supply and maintenance. The least need is felt for additional historic and cultural sites.

Cape Cod and Islands Region



Population and Resource Profiles

One of the most popular coastal destinations in the country, this region is made up of the Cape Cod peninsula and the islands of Martha's Vineyard, Nantucket, and the Elizabeth Islands. Tourism stands out as the dominant industry here, supporting a retail and service economy. In addition, retirement and second homes help sustain a large construction trade, while commercial fishing and other aquaculture also contribute to the economy. The shore is the obvious physical attraction here, including many beaches, salt marshes, coastal ponds, and the magnificent dunes of Provincetown. A major man-made feature at the entrance to the Cape, the Cape Cod Canal, connects Buzzards Bay in the west to Cape Cod in the east.

Supply in the Cape Cod and Islands Region

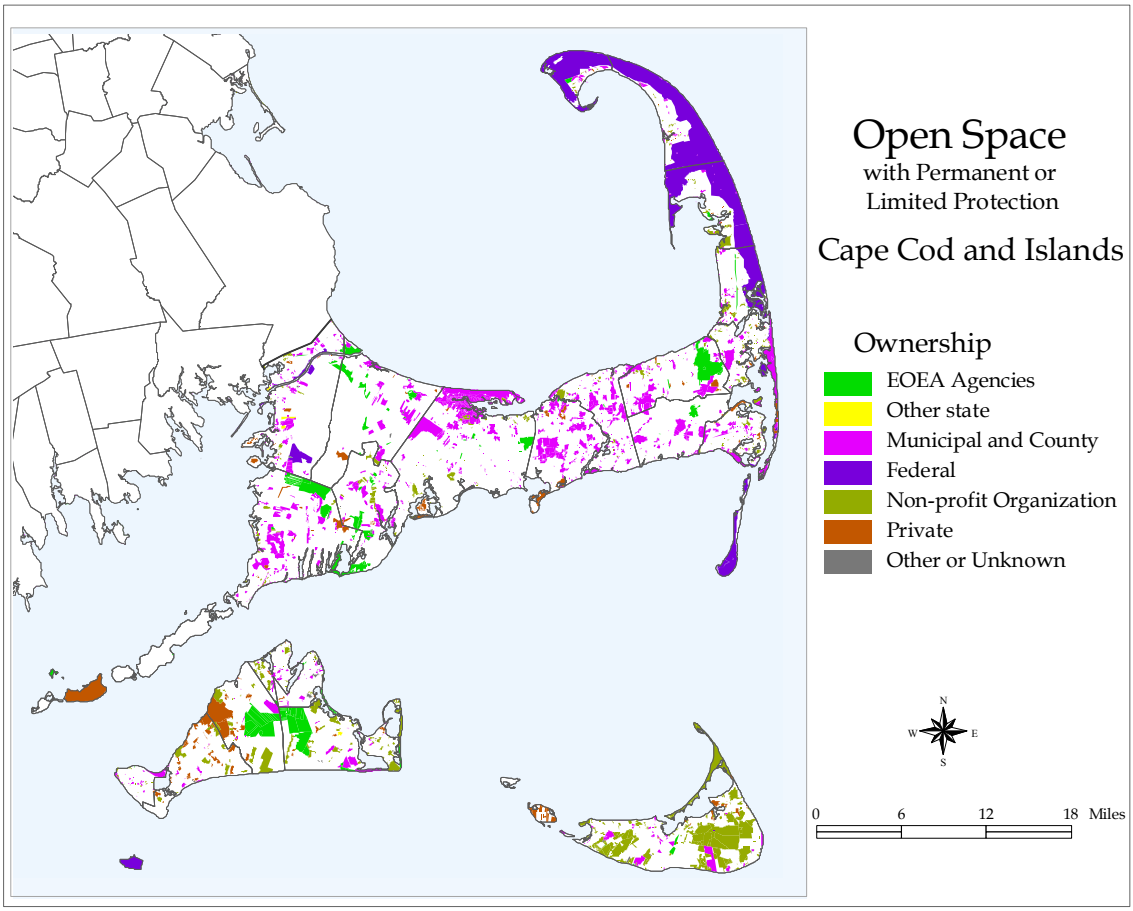


Figure 67. Protected Lands in the Cape Cod and Islands Region

Regional Facilities and Protected Land Supply Patterns

In the statewide review of open space supply, the Cape and Islands were noted as blessed with recreation opportunity, at .73 acres per capita. This region was also noted for its relatively high percentage of recreation and protected lands (42.1%). The visitation levels, however, of both in-state and out-of-state visitors that this region receives likely exceeds all other regions as well, with the possible exception of Boston itself.

On the Islands, Nantucket Harbor is second to none in size, beauty, and wildlife resource. Martha's Vineyard is astounding in the number of coastal water bodies, possessing almost as many as the entire Cape mainland. The major inlets include Katama Bay, Vineyard Haven Harbor, the Menemsha Pond, Chilmark Pond, Tisbury and Edgartown Great Pond complexes, the latter two having as many as eight or nine distinct coves of their own. This suggests the fundamental importance of surface waters, both coastal and fresh, to the resource base of the Cape. Add to these their associated great salt marsh complexes, and the groundwater reserves of these sandy lenses, and one can appreciate the powerful attraction of this

region to both people and wildlife.

With this wealth of resources, it is apparent why the Cape and Islands are reported as having, along with the Metropolitan Boston region, the highest percentage of "protected" lands that are strictly dedicated to conservation purposes. This protection category overshadows all others such as parkland, water supply protection, agricultural use, and historic preservation.

Ownership and Management of Open Space Lands

More than any other region of Massachusetts, the Cape has been the beneficiary of federal land protection efforts. The dramatic entryway to the Cape over the canal and bridges has both symbolic and practical importance, but these impressive feats of human engineering cannot compare to the extraordinary National Seashore at the far end of the Outer and Lower Cape. Arguably more than any other effort to date in Massachusetts, the protection of this area spanning the four towns of Provincetown, Truro, Wellfleet and Eastham, has preserved the inherent character of a region intact, and with it, its ecosystems and natural communities. Yet, the Seashore also hosts huge numbers of visitors, and intermingles with its permanent human communities, so that human presence, both recreation and economic is still very much a part of the landscape. While a continuing challenge to land management and good stewardship, this region and this facility exemplify and offer much in the way of instruction to all interested in recreation and conservation.

In contrast to the other six regions of the state, the state role is at its most modest on the Cape and Islands. Whether this is a chicken or an egg effect of the federal and non-profit roles is difficult to say. However, a number of important state facilities and focus areas are still found here, including:
DEM Nickerson State Park – the only major camping facility on the Cape, and nearby Hawks Nest State Park, Waquoit Bay and South Cape Beach; Scusset Beach Reservation and Shawme Crowell State Park (Sandwich);
DFWELE Indian Neck (Wellfleet) Wildlife Management Area, the Santuit River and Crane Wildlife Management Areas; and
On the Vineyard, the Correllis State Forest.

Major state financial contributions toward town-owned and managed conservation and recreation facilities continue to be funneled through the DFWELE for projects such as the Hyannis Ponds, and through the Self-Help and Urban Self-Help programs to facilities such as public boat access areas, conservation lands, golf courses and even farmland protection. DEM is actively working with the towns of Harwich, Orleans and Brewster on connections between existing state ownership and the shore, the Six Ponds area, and public ground water protection areas.

A new chapter in state involvement has been emerging over the last five years through joint state, federal and local pursuit of clean-up efforts at the Massachusetts Military Reservation (MMR) in Bourne, Falmouth and Mashpee. Ironically, it seems that the ground water contamination resulting from the federal and state national guard military presence has become the catalyst for seeing this major state owned land mass as a vital ecologic resource, where it was formerly viewed as just wasteland scrub pine and oak. Its importance as both pine barren and aquifer are now being recognized in the emerging 15,000-acre wildlife refuge at MMR.

Also more than in any other region, the towns of this Cape and Island region have been spurred to very active land protection efforts by five decades of intense development pressure and a growing understanding of the fragility of the natural systems that support life. The earliest effort dates back to the Sandy Neck project, accomplished with major assistance from the Commonwealth. Since the end of the 1970's, especially, the island towns and towns of Falmouth, Mashpee, Yarmouth, Barnstable and Dennis have invested great effort in land protection, including major bond issues. Nantucket and the Vineyard towns were fortunate and foresighted in their early adoption of a countywide land bank, based on a real estate transfer tax. With the land bank, burgeoning development has helped to preserve the very qualities that attract it. This past year, all 15 Cape (Barnstable County) towns also accepted local land banks, these based on property tax dedications. The lower Cape towns of Brewster, Orleans and Harwich have been very active in more recent years, especially in ground water protection efforts. Of course, the town-owned beaches are also vital recreation assets.

The presence of the Martha's Vineyard and Nantucket Land Banks deserve particular mention as unique, countywide public agencies. Nantucket's situation is a bit unusual in that the town and the county are the same geographic entity. However, on the Vineyard, the six separate municipalities work together on this regional land use body to identify and protect important conservation and recreation lands. It can be safely

said that since their adoption in the early 1980's, these bodies have gradually become the mainstays of land protection within their towns. However, traditional recreation areas, such as field-based facilities, continue to be the province of the individual towns.

The non-profit conservation and recreation entities also have a very prominent role on the Cape and Islands. On the recreation side, private camps such as the YMCA camps, Lyndon and Burgess Camps, at Lawrence and Spectacle Ponds in Sandwich, and private campgrounds, such as at Peters and John's Ponds in Falmouth and Mashpee, make important contributions. On the conservation side, all the major land trusts, and quite a number of local land trusts have been very active throughout the region. The Mass. Audubon's Wellfleet Sanctuary, The Trustees of Reservations' Lowell Holly Reservation in Mashpee, and The Nature Conservancy's work on the Islands' sand plain communities are all marvelous resources. The local land trusts, such as the Falmouth 300 Committee and Orenda Wildlife Trust, have collaborated through a regional entity called the Cape Cod Compact to amplify the technical and financial capacity of the local trusts. An interesting collaboration of all public and many private entities is presently underway in the Waquoit Bay National Wildlife Refuge, where a mix of funding and ownership is being used to achieve protection goals within the watershed of the Bay.

Towns where the action of non-profits has permanently protected the largest acreage include Nantucket, Edgartown, and West Tisbury, all island towns. On the mainland, the largest protection efforts to date are found in Wellfleet and Mashpee. On the for-profit side of the ledger, these towns are joined by Barnstable, Falmouth, Brewster and Yarmouth. Among lands that are owned by for-profit entities, it is important to note that many are not permanently protected.

The local non-profit organizations, while obviously of more modest means and holdings than the government agencies and national trusts, are nonetheless vital players in land protection efforts. Their special niches include personal knowledge of the local land owners and parcels, early recognition of protection opportunities and needs, short-term holding and quick acquisition response, informing local opinion and decision makers, and on-going land management efforts.

Demand in the Cape Cod and Islands Region

Activities

Understandably, the Cape and Islands top the state in the popularity of swimming (69.9%). This level of participation is also the highest reported for any activity in any region. A fairly close second, again a statewide high for this activity and all others as well, is walking, at 64.4%.

A substantial drop in percent participants occurs to the next most widely experienced activity, sightseeing (50.1%), although one-half the population is nonetheless very significant. A further gap is then encountered to 32.9% who report engaging in wildlife watching and nature study. This activity leads a cluster of similarly popular activities, including fishing (27.7%), golfing (25.5%), road biking (24.7%), sunbathing (21.3%), hiking (18.5%) and picnicking (17.2%).

Surprisingly low levels of participation were reported for baseball, ice-skating (rink), soccer, photography and painting, off road vehicles, and running and jogging. A partial explanation may be found in the large number of retirees on the Cape, and for the islands where certain facilities or league participation may be circumscribed, but these factors are insufficient in themselves to understand these patterns.

Figure 68. Participation Rates in Activities in the Cape Cod & Islands Region †			
	RECREATIONAL AREA	Statewide (% of Respondents††)	Cape Cod & Islands (% of Respondents††)
Field-Based Activities			
	Baseball	6.4	1.0*
	Basketball	5.6	5
	Football	2.1	2
	Golfing	24.7	25.5
	Ice Skating (rink)	0.1	0
	Playground activity	26.1	21.1
	Soccer	2.6	0
	Tennis	2.2	2.4
	Toddler activity (at tot lots)	5.5	2.5
	Volleyball	2.5	2.5
Passive Recreational Activities			
	Photography / painting	5	2.2*
	Picnicking	22.6	17.2
	Sightseeing, tours, events	54	50.1
	Sunbathing	19.6	21.3
	Watch wildlife, nature study	21.7	32.9*
Trail-Based Activities			
	Biking (mountain)	12.5	13.3
	Biking (road)	15.8	24.7*
	Horseback riding	0.8	0.9
	Off-road vehicle driving	0.7	0
	Roller blading / skating	2.7	4.2
	Running / jogging	3.9	1.8
	Skiing (cross country)	3.2	2.4
	Skiing (downhill)	7.6	6.2
	Snowmobiling	0.9	0
	Walking	56.5	64.4*
Water-Based Activities			
	Boating (motorized)	8.2	8.5
	Boating (non-motorized)	7.8	5.4
	Canoeing, rafting	8.5	4.6
	Fishing	26.5	27.7
	Hockey (natural water bodies)	0.3	0
	Ice skating (pond, lake or natural water bodies)	1.8	0.8
	Sailing	2.5	4.6
	Surfing	0.9	1.2
	Swimming	54.6	69.9*
	Water skiing / jet skiing	1.9	2
Wilderness Activities			
	Camping	7.7	4
	Hiking	30.8	18.5*
	Hunting	2.7	4.7
† Based on respondents who indicate that they have visited recreational areas in the last 12 months.			
†† Percents may not equal 100 due to multiple response.			
* Difference with Statewide result is significant at the 90% confidence level.			

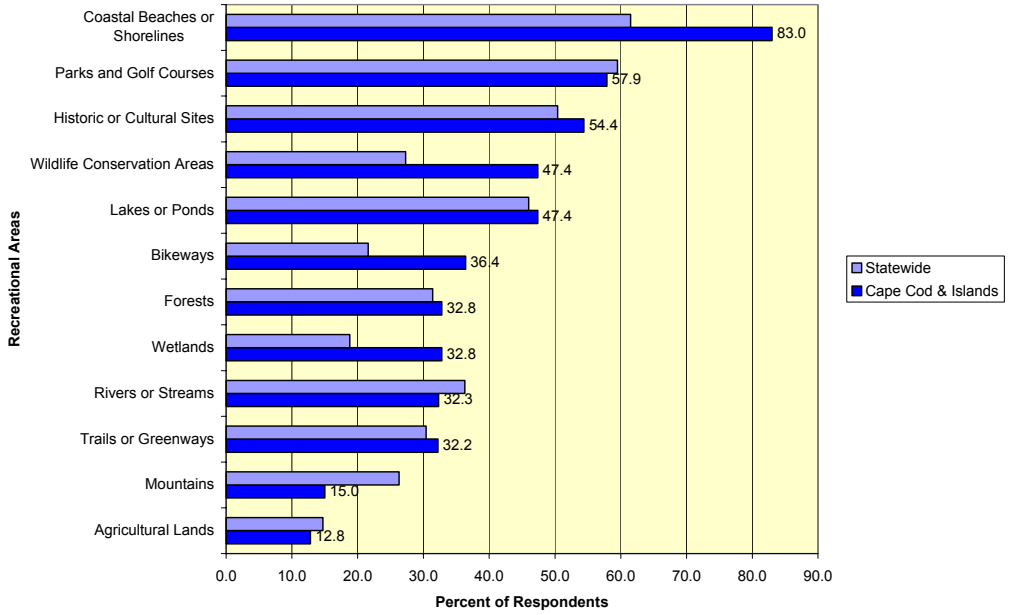
Resource Use

These activity patterns translate into a strong demand upon Coastal beaches and shorelines, golf courses, neighborhood parks, playgrounds, and tot lots, and historic and cultural sites. Curiously, these resource priorities sound much like those of other regions, even though the specific activity patterns are unique. One distinction noticed is that of wetlands, where this resource type ranks seventh compared with eleventh or twelfth in most other regions. Similarly, wildlife conservation areas and historic and cultural sites rank higher in use on the Cape than any other region, as do bikeways, in response to both the excellent facilities and the relatively flat terrain.

Conversely, agricultural lands are near their statewide nadir here, higher only than the Boston region, and the same pattern is in evidence for mountains, for obvious reasons, and rivers and streams.

In the aggregate, water-based and trail-based activities are strongly favored resource groups, while wilderness and field-base activities lag significantly in current use patterns.

Figure 69. Experience with Recreational Areas in the Cape Cod and Islands Region



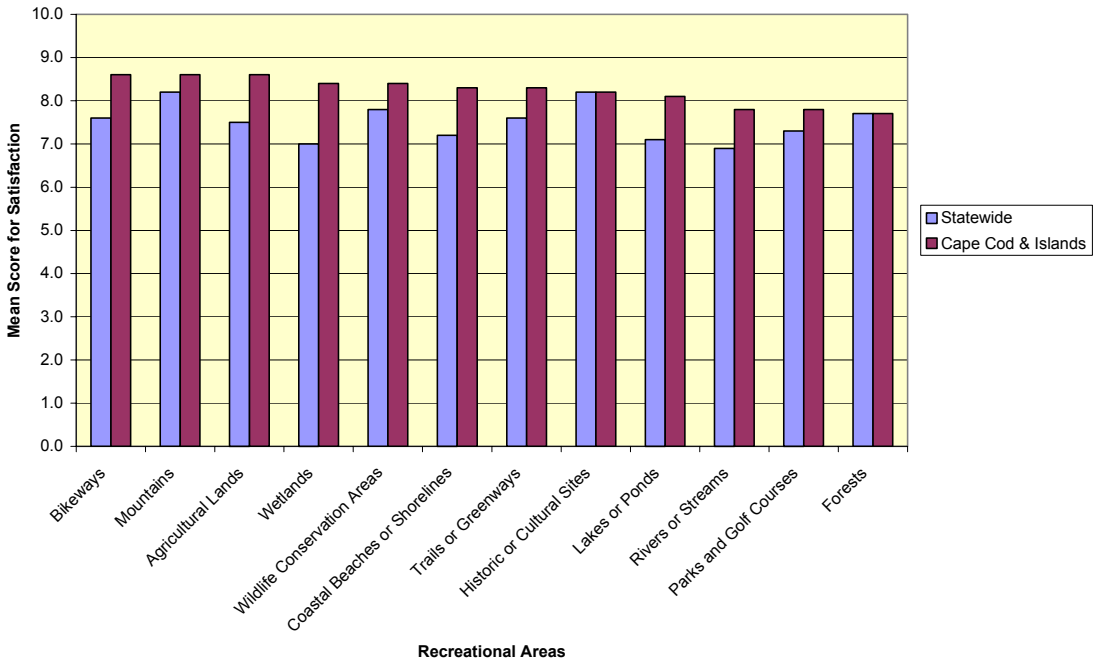
Needs in the Cape Cod and Islands Region

Satisfaction Levels

Residents of this region also report among the lowest dissatisfaction levels, ranking at or second from the bottom of the "dissatisfied" lists in 6 of the 12 resource types. For probably very different reasons, no respondents whatsoever expressed dissatisfaction with as to bikeways, forests and mountain resources. Only in terms of agricultural lands do Cape residents express dissatisfaction more than most regions. Except for agricultural lands, these dissatisfaction levels are not mirrored by distance traveled to resource areas, or by the median number of trips of users to these facilities. As to distance, Cape and Island residents travel farther than all but Southeast residents to rivers or streams (26.2 miles one way), and 84.5 miles to mountains, but report no special dissatisfaction with these resources. In fact, among that percentage of residents who visit mountain areas, a higher median number of trips is by Cape and Island residents, and to a lesser extent, Southeast residents to mountains, than any region except the Berkshires. While the distances are large and participation rates low, the frequency of trips to rivers and streams on the Cape and Islands is among the highest in the state.

Residents of the Cape and Islands travel among the very shortest distances to reach many of the other resource types, including wetlands, bikeways, lakes or ponds, coastal beaches, wildlife areas, trails or greenways, and forests.

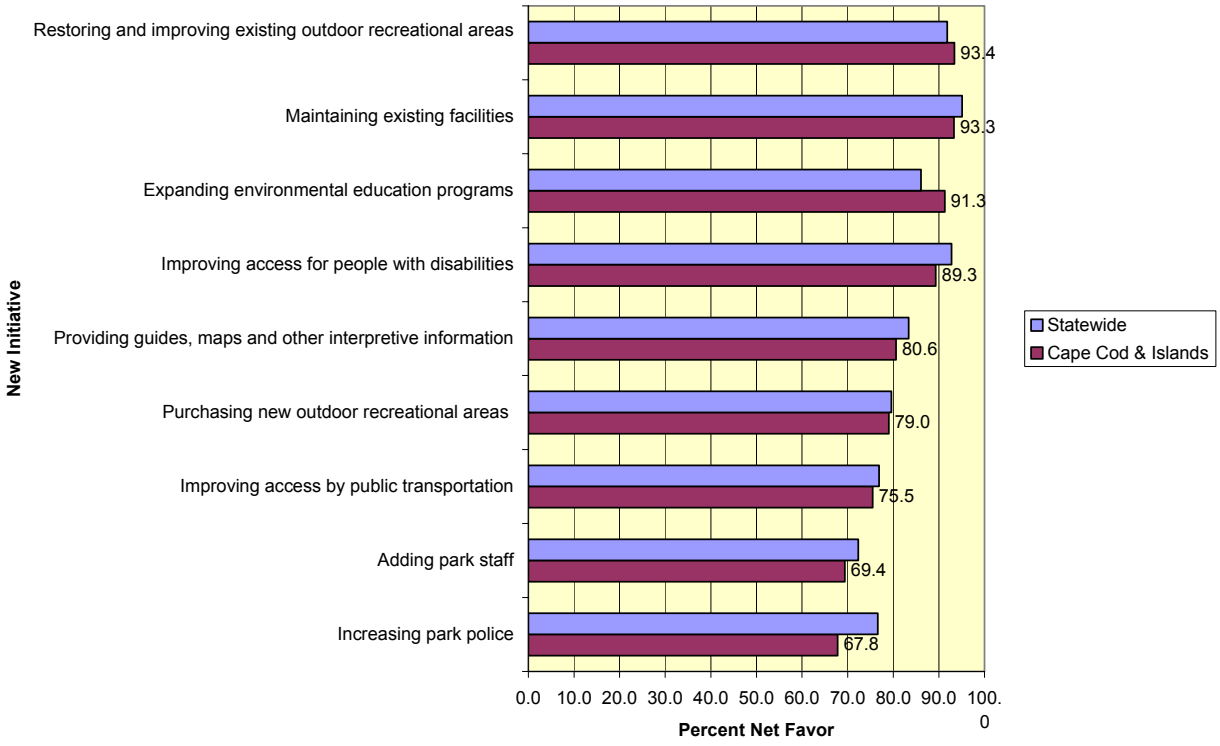
Figure 70. Satisfaction with Recreational Areas in the Cape Cod & Islands Region



Funding Preferences

A different preference pattern emerges in this region when compared to other regions. Here, restoring and improving existing areas tops the list (versus maintaining existing facilities), although by a slight margin. Also, expanding environmental education ranks a close third here, where statewide it falls to a distinct fourth. Overall the Cape shows a wider spread of favorability rankings, from the second lowest and lowest statewide score for "Adding park staff", and "increasing park police" (69.4% and 67.8%, respectively), to 93.4% in favor of restoration and improvements.

Figure 71. Funding New Initiatives in the Cape Cod & Islands Region



Facilities Needs

The survey shows higher general frequency of use of all types of recreation areas by residents of the Cape and Islands. The five most often cited facilities desired by Cape and Island residents, in rank order, are more swimming (17.5%) (perhaps implying the need for better access to the beaches and parking, or for less crowded beaches), road biking (15.5%), walking, (9.0%), playground (8.7%), and tennis (7.3%) facilities.

Multiple responses, but below 5%, were also reported for golfing, tot lots, picnicking, sunbathing, wildlife areas, mountain biking, roller-blading and skating, skiing (downhill), motor and non-motor boating, fishing, camping and hiking. The remaining activities have less than about one percent response rates.

These patterns are translated into a demand for improved or expanded access to facilities for neighborhood parks and playgrounds, historic and cultural sites, trails and greenways, and agricultural lands. Among the most interesting observation of all, Cape and Island residents expressed needs, when grouped by resource areas, rank lowest in the state for 10 of the 12 types. Only lakes and ponds and coastal beaches rank near median levels of need.

In one of the more striking regional patterns, the reported experience levels of both wetlands visitation and wildlife conservation areas was highest on the Cape and Islands. This observation tracks well with the reported occurrence of the highest quality of these resource areas in "Our Irreplaceable Heritage". A very different type of resource, i.e. bikeways, was also strongest on the Cape.

Figure 72. Inferred Need for New Recreational Areas in the Cape Cod & Islands Region